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A report on the scholarship program for students of limited means, sponsored in New Mexico by The Fund for the Advancement of Education. Also includes reports on two surveys conducted in New Mexico: *Factors Influencing College Attendance*, and *Factors Deterring Superior Students from College Attendance.*

The section on the scholarship program discusses the administration of the program—its philosophy and objectives, selection procedures, determination of need, determination of awards, and findings on characteristics of scholarship recipients (backgrounds, aptitudes, achievements, vocational interests, persistence in college).

The survey on factors influencing college attendance was based on data pertaining to high school seniors who graduated from 80 high schools in New Mexico in May of 1952 and who presumably had better-than-average aptitudes for college. Subjects of the survey on factors deterring superior students from college attendance were those who as high school juniors scored in the upper quartile on the New Mexico statewide college aptitude test administered in 1951–52. The survey was conducted in 1954, approximately one year following the normal high school graduation date of this group of students.

The report concludes with a chapter devoted to an evaluation of methods in administering a scholarship program of this type.

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ARE SCHOLARSHIPS THE ANSWER?

A REPORT ON
A SCHOLARSHIP PROGRAM
FOR STUDENTS OF LIMITED MEANS
SPONSORED IN NEW MEXICO BY
THE FUND FOR THE ADVANCEMENT OF EDUCATION

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U. S. DEPARTMENT OF HEALTH, EDUCATION AND WELFARE
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ARE SCHOLARSHIPS THE ANSWER?

A REPORT ON A SCHOLARSHIP PROGRAM
FOR STUDENTS OF LIMITED MEANS

Sponsored in New Mexico by
The Fund for the Advancement of Education
1952 - 1956

REPORT BY
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University of New Mexico

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INTRODUCTION AND ACKNOWLEDGEMENT

In early June of 1952 the University of New Mexico submitted to the Fund for the Advancement of Education a proposal for an unusual kind of scholarship program: able high school graduates of New Mexico who would not go to college because of financial limitations would be discovered and provided with sufficient funds to place them in college. Extreme need, rather than the more usual criteria, would be the principal basis of award.

The Fund responded, on June 26, with a grant of $50,000 for the ensuing year. In making this and subsequent grants, the Fund conceived the program as a pilot project designed to develop procedures for awarding scholarships of this kind, to discover the extent of the need for such scholarships, and to evaluate the effects of this type of program. The objectives of the program were formulated with the help of Dr. John M. Stalnaker, who has served as the Fund's consultant and liaison since the project began.

Three major lines of investigation were undertaken. There was, first, the design and subsequent evaluation of procedures used in awarding the scholarships. In this connection, the progress of each scholar was followed with care. Part II of this report, accordingly, deals with the operation and outcome of the scholarship program.

Late in 1952 a survey of 1742 New Mexico young people was undertaken. These students had been identified, when they were high school juniors, as scoring above the median on a standard college aptitude test. Their normal high school graduation date would have been May, 1952. The survey undertook to correlate their actual attendance or nonattendance in college with a variety of possibly relevant factors. The findings of this survey are given in Part III.

Part IV is the record of the results of another survey. This time the subjects were students who, as juniors, scored in the upper twenty-

five percentiles on the standard college aptitude test. They would normally have graduated in May, 1953. The survey was conducted a year later, in the spring of 1954. Its principal purpose was to find out what happened to the members of this highly competent group who did not go to college, and to discover, if possible, why they did not continue their education beyond high school.

The last three parts of this report in combination provide a fairly complete picture of the adverse factors affecting college attendance in New Mexico. The problem of salvaging the ablest students from economically handicapped homes is measured, and ways to approach a solution are suggested. It is hoped that the information presented here may be of value to the educational progress of New Mexico and may also be of interest in other states.

For the four years of the project the Fund for the Advancement of Education appropriated a total of $225,000. Both the generous financial support and the continuous interest of the Fund in the progress of the work are gratefully acknowledged.

Thanks are also due the many high school principals and teachers who helped select those worthiest to receive the scholarships and who gave unstinting cooperation in the search for the information reported in the surveys. Their interest and good will, prompted solely by a concern for the welfare of their graduates, were among the principal factors in the success of the project.

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I

Background: New Mexico

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BACKGROUND: NEW MEXICO

In its history, its cultural pattern, and its geographic and economic features, New Mexico is unique. A report on any aspect of its life can be understood and evaluated only when some of the dominant characteristics of the State are recognized. We begin, therefore, with a brief description of New Mexico.

Geography and Climate

New Mexico was long the fourth largest of the states, with an area of 122,634 square miles. This vast expanse of land exhibits a wide range of topographic features. The great plains lap into eastern New Mexico, but soon begin to swell upward toward the summits of the Rockies, which bisect the State from north to south. Lying close against the mountain chain on the west, is the valley of the Rio Grande. From this valley the land slopes upward to the continental divide, which lies well short of the Arizona border on the west. For the most part, the terrain is extremely rough, abounding in mountains, mesas, and canyons.

The northern mountainous areas of New Mexico receive up to thirty inches of rainfall, but most of the State is arid; some of the southern portions are true desert. On the same day temperatures may range from moderate or hot in some areas to below zero in others. The climate of much of New Mexico is delightful, but the general scarcity of water limits the State's productivity and population capacity.

The Economy

There are five major rivers in New Mexico, each having a concentration of population along its course. The rivers flow east and west

from the continental divide and south, flanking the Rocky Mountains on either side. Along these streams the Indians and Spanish first made their homes. All the sizable communities are located in the river valleys; local rainfall will not support a town of any size.

With 681,187 people in 1950, New Mexico had a population density of only 5.6 persons per square mile. Moreover, as in most western states, such density was—and is—far from uniform: a fourth of this state's people live in one of its smallest counties, while the populations of some of the larger counties are extremely sparse.

The State's great area aggravates many of the problems of governmental finance. With a limited tax base, the State has difficulty providing good highways, police and other regulatory services, and the necessary dispersal of schools. The situation is complicated by the fact that 34 per cent of the land in New Mexico is government owned or controlled and hence contributes to the tax income only indirectly.

The per capita income of New Mexicans in 1953 was $1347, as compared with the national average of $1709. In this respect, during the past decade New Mexico has greatly improved its relative position among the states. The chief factor has been a more than twofold increase in wages and salaries paid by the federal government. This is the principal source of income, followed by trade, services, and construction, all of which are related in part to federal spending. Mining and agriculture, essentially related to the natural resources of the State, each produces less income than any of the other sources mentioned.

New Mexico was first selected as a site for atomic research because it possessed isolated areas in which secrecy could be maintained and potential damage to persons and property minimized. Since World War II there has been a great expansion of activity by the Atomic Energy Commission and various agencies of the Department of Defense. Federal expenditures, always important in New Mexico, have become the mainstays of several communities.

The extent of New Mexico's mineral wealth is not yet fully known. There are large reserves of copper, potash, coal, petroleum, and uranium. All of these are being extracted and materially bolster the economy.

Agriculture, though it engages a large segment of the population, is severely limited by the scarcity of rainfall. Cattle and sheep ranches

are distributed over the entire State, but in many areas the carrying capacity of the land is low, even in "wet" years. Dry farming, though precarious, is widely practiced in eastern New Mexico. In the larger river valleys there is extensive irrigation, with cotton and alfalfa as the main crops. During the past few years all forms of agriculture in New Mexico have suffered from severe drouth and declining farm prices. From 1951 to 1954, agricultural income fell from 18.3 per cent to about 9 per cent of the total income to individuals in New Mexico. Many farm and ranch families have been impoverished by this decline.

New Mexico is a political, but not an economic, unit. Several of its border sections have their trade centers in neighboring states. The eastern and southern counties have a strong orientation toward Texas, and many towns along our northern and western borders look to Colorado, Utah, and Arizona for supplies and services.

The economy of New Mexico is as diverse as are its topography and its climate. The instability of revenue from marginal agriculture, with its extreme dependence on rainfall, produces wide variation in income for the same family in a short span of years. The tourist business and the mineral industries are also especially capable of fluctuation. Nothing in New Mexico suggests moderation.

The Three Cultures

One of the most interesting aspects of New Mexico is that three distinct ethnic groups live harmoniously within its borders and under its laws. The Indian, the Spanish-American, and the Anglo-American each stems from a different cultural background.

The Indian has adopted some of the ways of the Spanish and the Anglos, but he has retained most of his ancient, traditional customs, especially those relating to tribal organization and government. As a ward of the federal government his lot has varied from limited opportunity to downright hardship. Some of the Navajos, in the more remote areas of their reservation, are still without schools and have little medical care. The Indian has improved his situation through employment off the reservation and through his arts and crafts. But his main reliance, a semi-primitive agriculture, cannot support a rapidly growing people. Recently, some Indian lands have

been found to be rich in oil, gas, and uranium. The effect on some of the tribes is likely to be revolutionary.

Spanish colonization of New Mexico began late in the sixteenth century. The Spanish cultural pattern remains strong, especially in the isolated settlements along the upper tributaries of the Rio Grande. Until recent years, about half the people of New Mexico bore Spanish surnames. Spanish is the language of the home in most instances, and it is not uncommon for children to begin the first grade knowing little English. The Spanish-American population is largely rural and agricultural, though each small farmer or rancher is likely to be a skilled artisan, also. More and more Spanish-Americans are entering the skilled trades and the professions. Their numbers in the colleges of the State are steadily increasing.

The Anglo-American is the late-comer in this area. He began to arrive in numbers, chiefly via the Santa Fe Trail, about the middle of the nineteenth century. With his coming, exploitation of the natural resources of New Mexico was greatly accelerated, and new types of farming and ranching were introduced. In eastern New Mexico the people are largely of Southern origin, with a preponderance of Texans and Oklahomans. Elsewhere in the State there are "Anglo" representatives from all sections of the nation. The distribution of occupations among this segment of the population is fairly typical of that to be found elsewhere. The income and standard of living of the typical Anglo-American is much higher than that of the typical Spanish-American and far exceeds that of the Indian. In each group, however, wide variations are to be found, as in large population groups everywhere.

The Public Schools

New Mexico has a record of remarkable effort in the development of public education. For a decade teachers' salaries have been maintained at a level well above the national average and materially above those of neighboring states. In most instances school plants are well-designed, well-equipped, and well-kept, though there is a mounting shortage of facilities in the poorer areas of the State. Financial support of the public schools is a state, rather than a local, function, to an unusual degree. This fact is a reflection of an admitted need to

equalize educational opportunity for New Mexico's children in the face of extreme variation in the economic situations of different communities.

One of the principal problems of the public schools of New Mexico is to obtain the necessary dispersal of schools to care for the sparsely populated areas and at the same time maintain the quality of instruction. With the development of improved roads has come an increasing tendency to consolidate rural schools and bring the children in by bus, sometimes from homes forty to fifty miles from the school.

Another problem derives from the usual practice of basing the capacity to build schools on the assessed valuation of a school district. This policy results in some extreme variations in the quality of school plants. Plant value per pupil in a district located in an oil field may be ten times that in a Spanish-American village.

Durii g the years covered by this experiment, New Mexico had 148 public high schools and twenty-one parochial high schools. Fifty-one of the public high schools were accredited by the North Central Association. These were located in the major centers of population and consequently enrolled a disproportionate fraction of the students. The enrollments in public and parochial high schools, over a five-year period, are shown in Table 1.

Table 1

ENROLLMENTS IN PUBLIC AND PAROCHIAL HIGH SCHOOLS
1951–1955

Year Ending	Public High Schools	Parochial High Schools	Total
1955	31,409	2,407	33,816
1954	26,996	2,370	29,366
1953	26,810	2,337	29,197
1952	23,928	2,301	26,229
1951	24,106	1,972	26,078

Of particular interest for this study are the senior enrollments of the years 1950-55 as shown in Table 2.

The upward trend of these enrollment figures reflects principally the fact that the population of New Mexico is increasing by in-migration much more rapidly than that of most states.

Table 2

SENIOR ENROLLMENTS IN PUBLIC AND PAROCHIAL HIGH SCHOOLS
1951–1955

Year Ending	Public High Schools	Parochial High Schools	Total
1955	6,429	506	6,935
1954	5,528	452	5,980
1953	5,447	441	5,888
1952	4,892	440	5,332
1951	4,802	364	5,166

Higher Education

New Mexico has seven publicly controlled institutions of higher education and two that are privately controlled. There is thus a much greater dependence on state support of higher education than in most states, where private institutions are in the majority. On the average, during the years of this program each of New Mexico's state-supported institutions of higher learning served approximately 110,000 persons. The national ratio of population per publicly supported institution is more than four times as large. In higher education, too, New Mexico has put forth a major effort.

The considerable number of institutions is justified by the great size of the State. On the average, each institution serves an area of 17,381 square miles, and the geographical distribution of the institutions is good. In New Mexico, as elsewhere, students are likely to attend the college nearest their homes; and if there happens to be a college within commuting range, the probability of attendance is increased.

All the state-supported institutions in New Mexico are accredited by the North Central Association of Colleges and Secondary Schools. Together, they offer nearly all the curricula for which there is a demand. Costs are moderate. Charges for board, room, and tuition during the period of this experiment ranged from $600 to $850 per school year.

Despite its adequate provision of higher educational facilities, New Mexico has a markedly low rate of production of college stu-

dents. In 1950 the United States produced 1650 college students per 100,000 of population; New Mexico produced 1345. Neighboring states all had higher rates:

Arizona	1,713
Utah	3,029
Colorado	2,061
Kansas	1,984
Oklahoma	1,957
Texas	1,754

Some of the reasons for the comparatively low output of college students in New Mexico will be developed in later sections of this report.

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II

Administering a Scholarship Program

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ADMINISTERING A SCHOLARSHIP PROGRAM

Philosophy and Objectives

Notification of the first grant of $50,000 from the Fund for the Advancement of Education to the University of New Mexico was confirmed in a letter dated June 26, 1952, from Dr. Alvin C. Eurich, Vice-President of the Fund, to President Tom L. Popejoy of the University. Inasmuch as this letter sets forth the philosophy of the program and the principles by which it was developed, it is appropriate to quote from it extensively. Dr. Eurich wrote:

> In line with your proposal, this grant is made for the purpose of developing procedures for a state-wide scholarship program that would make it possible for high school graduates of high ability, who come from families of low economic level, to go to college.
>
> . . . . We are agreed that although we have many scholarship programs in colleges and universities throughout the country, no adequate procedures have been developed for insuring that scholarships are awarded to students who would not go to college without such scholarships. For the most part, scholarships make it possible for students to go to better institutions than they would ordinarily attend on their own resources.
>
> . . . . it is not essential that a student attend the University of New Mexico, although we assume that most of them to whom scholarships are given will do so. It is also our understanding that these scholarships will be awarded only to students who plan to register as undergraduates for a program in the liberal arts rather than in a technical field.

In conferences with Dr. John M. Stalnaker, who had been designated by the Fund as its consultant for the program, a few points

were clarified further. It was decided that scholarship awards would be made only to those who had not previously enrolled in college. Applicants were to be expected to have sufficient ability, as judged by high school records and test scores, to do competent college work, though not necessarily to become honor students. A successful applicant could select any accredited institution of higher learning in the region (New Mexico and neighboring states) but not elsewhere, since no allowance for travel was contemplated. Finally, it was decided that awards should be variable in amount, depending on the costs at the institution attended and the applicant's resources.

Procedures

Administration of the Program. Three officers of the University were charged with the administration of the scholarship program. These were the Director of Student Affairs, Sherman E. Smith, who served as the program's coördinator and liaison with the Fund; the Dean of Men, Howard V. Mathany, who has general responsibility for other scholarship programs at the University; and an Assistant Dean of Men, who was employed at the outset of the program and largely assigned to it. The first incumbent in the third position was Merle M. Milfs, who did most of the detailed work of the program, including the surveys described in later sections of this report. In the latter half of the third year of the program Mr. Milfs took leave to resume graduate study. He was replaced by Warren F. Lee. In the fourth year Mr. Lee was assigned to other duties, and James R. Bruening served as Assistant Dean.

The three officers mentioned formed an informal committee to evaluate the applications and make the awards. From year to year there was some variation in the part each played in the process. In general, there was an increasing delegation of authority and responsibility to the Assistant Dean. It is important to stress that many aspects of the program were facilitated by the fact that so few persons were involved in its administration. The work was continuous and unhampered by the necessity of scheduling meetings of boards or committees. A high degree of flexibility both in policy and operation was possible. In making or modifying awards, the administrators

could evaluate somewhat delicate factors with a degree of candor which might have been injudicious, or at least improbable, had a large committee been involved.

Funds received by the University from the Fund for the Advancement of Education were placed in an agency account of the University's business office. Upon authorization by the Dean of Men, disbursements for scholarships were made to the general account of the University and to the general accounts of other institutions. Charges for salaries, travel, and other expenses of the program were made directly to the agency account.

Selection Procedures. The date of the first grant from the Fund for the Advancement of Education, June 26, 1952, left little time for the formulation and institution of selection procedures for 1952-53. Many high school principals, who would naturally be the best sources of nominations, were absent from their communities. All possible efforts were made to contact them and others who might be helpful, and the program was given the widest possible publicity. With minor exceptions the following procedures were used:

1. Recommendations from high school principals were sought, as has been mentioned above. Reliance was placed on these recommendations because principals are usually good sources of information not only on the student's scholarship potential, but also on his financial status. Moreover, since most students who are bound for college have made their plans by the close of the senior year, it seemed logical that principals would know those students who had hoped to go to college but who had given up the idea because of financial limitations.
2. On the basis of recommendations from principals and from other informants, scholarship-application forms bearing a brief description of the terms of award were mailed to the recommended students. (See the box.) Following an examination of the completed application, a preliminary determination of the applicant's eligibility was made.
3. The administrators of the program visited each community from which an application had been received. The applicants were interviewed, often in their homes, and a check was made through local sources on the validity of the financial statement made by the

APPLICATION FOR A SCHOLARSHIP
UNDER THE
NEW MEXICO GRANT
OF THE
FUND FOR THE ADVANCEMENT OF EDUCATION

The Fund for the Advancement of Education, which was established by the Ford Foundation, has made available a number of scholarships which are to be awarded to New Mexico high school graduates of high ability who would not go to college unless they were granted substantial scholarships.

Scholarship awards are to cover the academic year 1953-54. There is no assurance that the awards will be renewed. The amount of each award will depend on the needs of the student, but will in no instance exceed $850.00.

In order to comply with the terms of the grant it is necessary that its administrators establish accurately the need of each applicant. The following questions are asked for that reason. Your reply will be kept in strict confidence.

In addition to this application it will be necessary for the applicant to submit (1) an official transcript of his high school record and (2) a letter of recommendation from the high school principal, the superintendent of schools, or one of his teachers.

Date.....

Name..... Age..... Sex (M or F).....
Home address.....
High school..... Year of graduation.....
Name of parent or legal guardian.....
His address.....
What is the relation of this person to you?.....

PLEASE ANSWER THE FOLLOWING QUESTIONS:

1. What savings or other accumulated financial resources are available for your college expenses? Give the amount.....
2. What amount, per month, can you expect from your parent, guardian or similar source?.....
3. What is the occupation of your parent or guardian?.....
   What was his approximate annual income in 1952?.....
   What was the combined income of all members of your immediate family during 1952?.....
   How many are dependent on the family income?.....
4. Give any other details you wish regarding your financial situation.....
5. Had you planned, before making this application, to attend college?.....
   When had you planned to enroll?.....
   How had you planned to finance your college attendance?.....
6. Do you declare that without substantial financial aid it will be impossible for you to attend college this year?.....
7. If awarded a scholarship, what college or university do you plan to attend?

8. In what course of study (Arts and Sciences, Fine Arts, etc.) do you plan to enroll?.....
9. Have you requested that your high school transcript be sent to the University of New Mexico?.....
10. From whom have you requested a letter of recommendation for a scholarship award? Please give name and address.....

I certify that the answers I have made to the foregoing questions are, to the best of my knowledge, full and correct. It is my understanding that any misrepresentation in this application will be grounds for the withdrawal of any scholarship aid granted to me.

Signed.....

ADDRESS ALL CORRESPONDENCE TO
DEAN HOWARD V. MATHANY, UNIVERSITY OF NEW MEXICO

applicant. This operation required nearly a month of travel and was completed toward the end of the first week in September.

4. On the basis of all the information secured, awards were made in varying amounts in accordance with the apparent need of the student. The successful applicants were notified of their awards and asked to accept or refuse them immediately. The operation was completed by September 15 with no margin of time to spare.

Partly because the program was announced so late, the first fall of operation had some exceptional features. Nearly all of the 111 applications received were valid ones. Some of the applicants had been out of high school for a year or more, having been prevented from attending college by a lack of funds. Inasmuch as nearly all of the applications were made at the suggestion of high school staffs but without general announcement in the schools, which were not in session, there were few "opportunistic" applications. Most of the graduates of 1952 had already made definite plans for college. Sixty-eight awards were proffered, and sixty-two were accepted.

In the second and third years in which awards were made the procedure was somewhat refined and standardized as follows:

1. Lists of applicants were assembled. Some applications were spontaneous, but most of them were obtained from students nominated by high school principals.

2. Eligibility of the applicant was established on the basis of
   a. a completed application form,

b. one or more letters of recommendation,
c. the confidential evaluation of the high school principal or guidance director,
d. the applicant's high school transcript and college aptitude scores, and
e. interview and local investigation.

Determination of Need. Having established the applicant's probable college competence, the crux of the selection procedure was, of course, to decide whether his financial situation was such that he would not attend college without material aid. The administrators of the program recognized that the only way they could be certain that an applicant really would not attend college was to wait until the fall term had begun and then see whether he had or had not enrolled. Even this device, which would largely have defeated the purpose of the program, would have been ineffective once the program was in continuous operation.

The best that could be done was to decide whether college attendance was probable in view of the applicant's financial situation. This, in turn, required full and accurate information about family finances. It is known that there is much misrepresentation in scholarship applications when need is a criterion. Bernard B. Harris, in a graduate thesis at the University of Wisconsin, has reported that of two equal groups of forty-three scholarship applicants at that university, one successful, the other unsuccessful, the successful group reported $17,126 *less* income on their applications than their families had actually received, whereas the unsuccessful group reported $492 *more*. All eighty-six of the Wisconsin applicants claimed that they could not enroll in college without a scholarship, yet only two of the forty-three unsuccessful applicants did not enroll.

To help ensure that the financial information obtained was correct, two devices were used. The first was a statement to the applicants that any later discovery of misrepresentation in their applications would result in the termination of their awards. During the whole course of the program, this provision never had to be invoked. The second, and much more effective, device was a confidential check, with sources in the home community, on the financial position of the family.

There seemed to be surprisingly little reticence about financial matters on the part of either the applicants or their parents. This was especially true among the many cases of family catastrophe or extreme hardship which were discovered.

Total family income was by no means a significant indication of need unless family commitments were also taken into account. One applicant, for example, reported a total annual family income of $8,175, but the family numbered nine. The father's income for the year was only $2,425.

One of the questions included in the application form was "Had you planned before making this application to attend college?" The answers, in the main, were affirmative. If the affirmative answers to the question were taken at face value, it would, of course, appear that the applicants would have attended college without assistance and should therefore have been declared ineligible under the terms of the grant. The answers were discounted in many instances for the following reasons:

Many students had planned to attend college *provided* substantial aid were forthcoming from some source or other.

Some of the students proposed to undertake to earn their way completely through part-time employment. As one student put it, "by eating one meal a day, if necessary." The experience of the administrators of the grant is that such a venture is rarely successful, especially in the freshman year. It certainly cannot constitute a normal college experience of the sort contemplated in setting up the grant.

Some of the students who had, in fact, given up hope of going to college felt that an affirmative answer to the question on college plans was necessary in order that they be considered. This attitude was suspected at the time the awards were made and was confirmed in subsequent conferences.

Since the number of applications considerably exceeded the number of possible awards, the administrators held to a very conservative position. No award was made unless the applicant's need was established beyond a reasonable doubt.

Determination of Awards. It was decided that the maximum award to any student should cover no more than tuition and fees, board and room. It was felt that in the interest of the morale of the stu-

dents, they themselves should make some contribution to their own maintenance. At the University of New Mexico, for example, the amount of money required over and above tuition, fees, board, and room is approximately $250 per year. This comparatively small amount can be earned by the student in part-time employment during the school year.

Charges for tuition, fees, board, and room in New Mexico colleges are variable. In 1952-53 they ranged from $620 to $836 per year. Accordingly, maximum base awards, ranging downward from $850, were established for the different institutions. From the base award, in each instance, were subtracted the following items: (1) any accumulated savings or reserves for the student's higher education; (2) any contributions to the student's expenses from the family or any other source; (3) any other awards.

Very few awards were made to applicants living in communities where colleges are located. The cost of attending college in such instances is little more than that of attending high school, and it seemed evident that few such students would find the financial barrier too great. An occasional exception was found in the applicant whose family was in such financial straits that it could no longer afford to provide subsistence for him.

Modification of Awards. Initial awards were made for one year only, or so much of the year as the scholar might remain in college. In no instance was the initial award revised downward within the first year. In a few cases, when it became evident that the scholar's financial resources had been underestimated, awards were revised upward toward the allowable maximum at midyear.

When an award was made for a second or any succeeding year, the whole question of the scholar's financial need was re-examined. In general, continuing awards were progressively reduced to a minimum which would permit the scholar to remain in college. Reduction was sometimes possible because of increased opportunity for self-support, sometimes because the family situation had improved. There were also instances in which the initial award was discovered to have been over-generous. Evidence to this effect was sometimes supplied unconsciously by the scholar himself when, for example, he appeared to be able to afford unnecessary expenditures or seemed not to rely on self-support in any important degree.

Any adjustment of his award was discussed with the scholar. These conferences were nearly always good-natured and frank. Financial planning for the forthcoming year was regarded as a mutual problem to be worked out by the scholar and the representative of the program. Voluntary suggestions by the scholar for a reduction of his award were not unusual. When the scholar was enrolled in another institution than the University of New Mexico, there was, of course, a reliance on the recommendations of personnel officers of that institution.

Selection of the College. In his application, the student was asked to indicate what college or university he planned to attend if he should be awarded a scholarship. This information was essential in establishing the amount of his award, as has been shown. In every instance, the award was made in terms of the institution named as first choice. In the letter of award the applicant was told that he could at that time change his mind as to his choice of college, with a possible modification of the amount of the award, but that he could not change later. The applicant was given a few weeks in which to accept or decline the award.

The purpose of making the awards nontransferable after they had been accepted was to protect the successful applicants from pressure by college recruiters, to whom they might appear especially attractive prospects. The rule was suspended only once in the three years of operation of the program, and in that instance there was evidence of heavy pressure from the institution to which the applicant chose to transfer. The transfer was allowed, prior to the student's enrollment, because it appeared that the school to which he proposed to transfer was, in fact, more suitable for him.

The administration of the program was sharply criticized by the president of one of the other state-supported colleges on the grounds that a disproportionate share of the awards was made to students enrolling at the University of New Mexico. It is true that a large proportion of the awards was made in terms of the University (see Table 6), but the proportion of applications naming the University as first choice was even higher. It is possible that some applicants may have assumed that their applications would be regarded more favorably if the University, which administered the program, was designated as their choice. There is no reliable way to evaluate this

conjecture. The administrators of the program scrupulously avoided giving any impression that the choice of college would be a factor in the award.

Table 3

APPLICATIONS, AWARDS, AND ACCEPTANCES

Years	Applications	Awards	Acceptances
1952–53	121	78	72
1953–54	241	63	60
1954–55	185	71	61
TOTALS	547	212	193

Handling of Awards. When an award had been made, and the college had certified that the student was actually enrolled in a suitable, full-time program of study, payment was made directly to the business office of the college. The first payment covered the expenses of the first semester or quarter, and subsequent payments were made on a term basis. In general, funds were credited to the scholar's account in full or partial payment of board, room, and tuition. The scholar was thus relieved of all responsibility for the expenditure of his award. In one institution, which operates a sort of bank for its students, the money was deposited in the student's personal account. In this instance, receipts were required.

The continuing enrollment of the scholar was confirmed by grade reports, which were required at the close of each term. In addition, one of the administrators of the program made frequent visits to each institution in which scholars were enrolled. The purpose of these visits was principally to interview the scholars and evaluate their progress, but incidentally to confirm all financial arrangements. In general, all of the participating colleges were warmly cooperative, and the whole program was conducted without any untoward financial incident of consequence.

Summary of Initial Awards

Initial scholarship awards were made in three successive academic years, beginning with 1952-53. In Table 3 are listed the number of applications received, the number of awards made, and the number

accepted in each year. Ten of the seventy-eight awards in 1952-53 were made at midyear. In succeeding years there were no midyear awards.

It is significant that, although the number of applicants in the first year was less than half that in the second, the number of awards was somewhat larger. In the first year, as has been noted, the number of qualified applicants was somewhat increased by those who had graduated from high school a year or two prior to 1952, but who had not been financially able to enroll in college. In the second year, despite every effort to define the conditions of eligibility for scholarships under the program, there was some misconception of them. Many of the applicants were outstanding students who did not appear to need material assistance in order to go to college. Evidence on the validity of this conclusion will be presented later (Page 38). In the third year, the terms of award were better understood by high school counselors, so that the number of applications declined significantly.

It is reasonable to inquire whether the number of awards, ranging from sixty-three to seventy-eight per year, measured the extent of the need evidenced in the applications, or whether it merely reflected a limitation of funds. This is an important question, for it bears on the larger issue of the scale of future scholarship programs of this kind or similar kinds. The best answer is that in neither the second nor the third year were there enough qualified applicants to use all of the available scholarship funds. The possibility that the program was administered too conservatively must be taken into account. But the administrators had a variety of compulsions to award as many scholarships as possible. It seems probable, in retrospect, that for each of the very few applicants who should have received scholarships but did not, there was a successful applicant who might have found a way to attend college without aid from this source. Also, as will appear later, a number of those who did receive awards lacked either the competence or the motivation to make good use of their opportunities.

Each year, then, there were approximately sixty-five New Mexico high school graduates who possessed both the necessary scholastic qualifications and the desire to enroll in a liberal arts curriculum in college, but who for financial reasons would have been unable to do

so. This was little more than 1 per cent of the number graduating from the high schools of the State each year of the program. It was a far smaller proportion than would have been estimated in advance of the experiment.

There is reason to believe that lack of motivation was a strong factor in limiting the number of applicants. In this connection, it is significant that nineteen successful applicants did not accept their awards. In a few instances these students were prevented by illness or family situations from enrolling, but the majority simply preferred not to continue their schooling. As will be pointed out later, a considerable proportion of those who did enroll withdrew for no apparently valid reason.

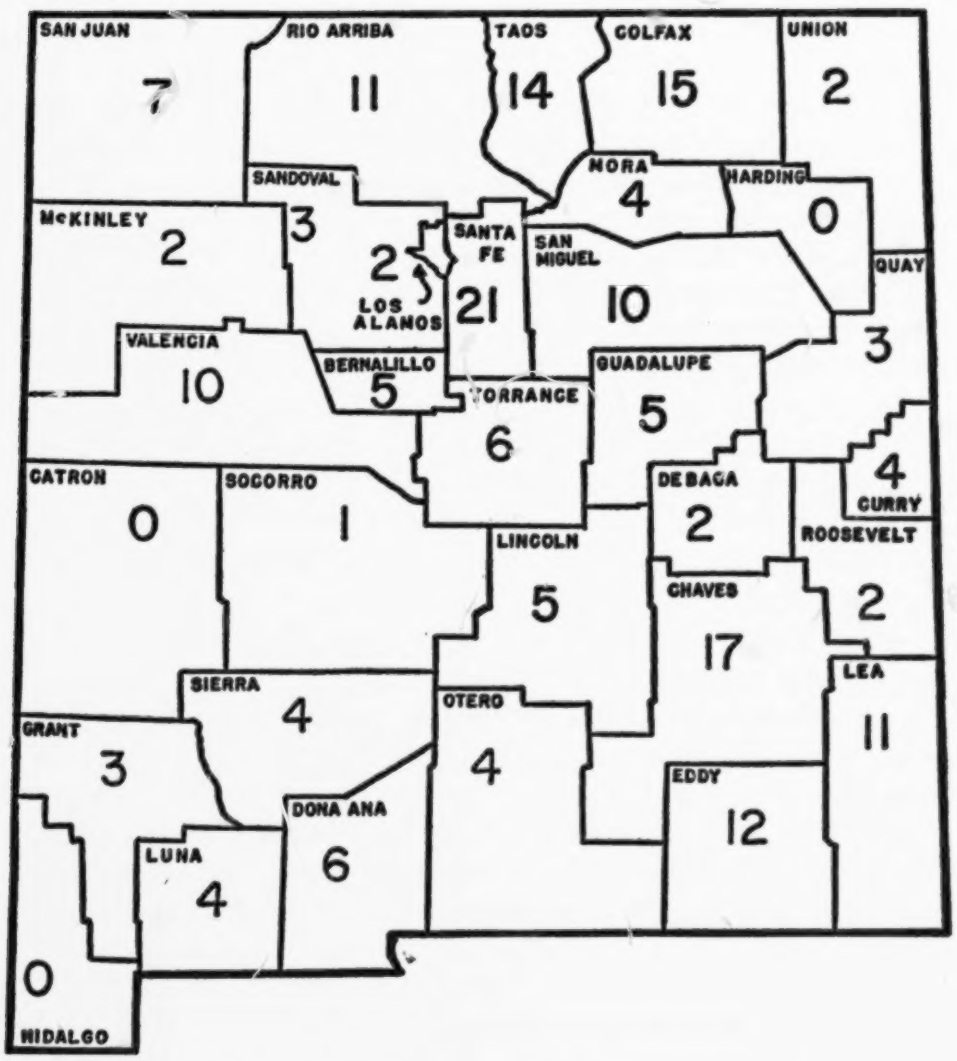
The geographic distribution of the awards was very broad, as is shown in Figure 1. No section of the State was unrepresented. In the main, the distribution is like that of the population, except that few awards were made in those major centers of population where colleges are located. Thus in Albuquerque, where approximately one-fifth of the population of New Mexico is concentrated, there were only three awards. There were none in Las Cruces, the site of the New Mexico College of Agriculture and Mechanic Arts.

About one-third of the scholars came from communities with populations in excess of 10,000, one-third from communities in the 1000-10,000 population range, and one-third from villages and rural areas. In general, cities and large towns were much less productive of applicants than rural areas and villages, on a per capita basis.

Table 4 gives the distribution of family incomes for the scholars. Instead of gross family incomes, the income per member of the family has been calculated and reported here. In rural New Mexico, especially, the family may include several grown, and sometimes married, sons or daughters, whose earnings are included in reported family incomes. One girl reported a gross family income of $16,644, but the family numbered twelve. In this instance the money for the applicant's college expenses could probably have been spared, but the family was unwilling to help her go to college, holding that college education is of no value to a woman.

The number of cases reported in Table 4 falls considerably short of the total number of awards. In some instances no reliable figures on family income were available. These were not required when it

FIGURE 1



Number of Scholarship Awards in Each New Mexico County

Table 4

CLASSIFICATION OF SCHOLARS ACCORDING TO PER CAPITA FAMILY INCOME

	Per Capita Income				
	$0–400	$401–800	$801–1200	$1201–1600	$1600–
Number of Scholars	52	79	17	12	3

was known that the income was very small; when, for example, the family was known to be on the welfare rolls. If the data were complete, the additional cases would all fall in the income ranges below $800 per family member.

One of the striking features of the group to whom awards were made was the high incidence of family catastrophe among its members. The fathers of twenty-eight of the scholars were deceased. In several other instances one of the parents was incapacitated by illness, often of a very expensive kind. Eight of the scholars came from broken homes. The administrators gained the strong impression that for many of the applicants college would have been a normal expectation except for some unpredictable family misfortune. Among this group, motivation was strong, often deriving from a tradition of college attendance in the family.

Table 5 gives the distribution, by amount, of the initial awards which were accepted. More than half the awards were large enough to cover board, room, and tuition, the maximum allowance. The distribution of scholars by institutions is shown in Table 6. There was almost no disposition on the part of the applicants to choose colleges outside New Mexico. Except for those applicants electing the University of New Mexico, who were drawn from all parts of the State, there was a decided tendency to choose the college nearest home.

Table 5

DISTRIBUTION OF INITIAL AWARDS BY AMOUNT

	1952–53	1953–54	1954–55	Total
$ 0–300	9	1	8	18
$301–400	3	1	3	7
$401–500	15	9	8	32
$501–600	9	18	7	34
$601–700	8	9	16	33
$701–850	28	22	19	69

Table 6

DISTRIBUTION OF SCHOLARS BY COLLEGES

	1952–53	1953–54	1954–55
University of New Mexico	46	37	41
New Mexico College of Agriculture and Mechanic Arts	7	4	4
New Mexico Highlands University	13	8	5
Eastern New Mexico University	4	6	8
New Mexico Western College	1	3	1
New Mexico Institute of Mining and Technology	0	2	2
Colorado College of Agriculture and Mechanic Arts	1	0	0

Recruiters for the various colleges were active in urging qualified high school seniors to apply for the scholarships—and naturally urging the selection of the recruiters' colleges by the applicants. This activity may have had some effect on the distribution of awards. Certainly, it had the advantage of disseminating information about the program.

The limitation of awards to those enrolling in liberal arts curricula no doubt diminished the numbers of scholars attending the Institute of Mining and Technology and the College of Agriculture and Mechanic Arts. During the three years of this program the College was engaged in a cooperative program with the White Sands Proving Grounds for the training of scientists and engineers. Under this arrangement a student could work half of each year and in five years earn a baccalaureate degree. Many students who could not otherwise attend college were thus enabled to do so. It is probable that the number of applicants received by the Fund-sponsored program would have been increased as much as 50 per cent if the White Sands program had not been in effect. Many of those who enrolled in the latter would no doubt have chosen some other field than engineering in order to become eligible for an award rather than to have been denied any opportunity for college training. The presence of the White Sands program did much to ensure that the Fund-sponsored program, with its emphasis on the liberal arts, did not use scholarship funds to modify educational objectives.

Women outnumbered men among the scholars 103 to 90, despite the fact that in New Mexico about three times as many men as women attend college. An examination of the applications indicated

that girls are more likely than boys to be without financial resources for college because, first, their parents are less likely to make provision for their higher education and, second, their opportunities for well-paid summer employment are much more limited.

A Study of the Unsuccessful Applicants

The administrators considered it desirable to check on the selection procedures by finding out what had happened to those applicants who had not received scholarship awards. Accordingly, inquiry was made of the high schools with regard to the 292 unsuccessful applicants of 1953 and 1954. Information on 242 cases was forthcoming. Of these, 173 enrolled in college; sixty-nine did not.

Among the 173 who did attend college, 127 had scholarship aid, ranging from tuition upward, from other sources. Only twenty-eight were known to have entered college without assistance. This represents a little less than 7 per cent of the 426 applications received in 1953 and 1954.

Of the sixty-nine who were known not to have entered college in the fall following their graduation from high school, the occupations of forty-four were reported. Of these, nine were married women, nine were men in military service, and twenty-eight were employed in their home communities. It is reasonable to assume that perhaps a third of the sixty-nine who did not enter college will do so later.

The fact that so many of the unsuccessful applicants received assistance from other sources points up the fact that most of the applicants were well qualified academically. A failure to demonstrate sufficient financial need was the usual basis for withholding an award under this program. In the main, the foregoing data suggest that the selection procedures used were fairly successful in distinguishing between applicants whose need was real and those who applied opportunistically.

The Scholars

Backgrounds. The backgrounds of the 193 scholars were as diversified as their geographic origins. Many of them came from small high schools in rural areas or villages. Some of these schools were unable

Laura came to the University from a town in south-central New Mexico, where her family had lived for three years. The family moved to New Mexico seeking improvement in the health of her father, a pathologist, who had been completely disabled by Parkinson's disease and arthritis. Her mother was a high school graduate. Laura had been encouraged to plan on college, but her father's illness made it impossible for her family to help. The total family income in 1950 was $2,268, on which four persons were dependent.

Laura had an exceptional high school career. Her record was straight A, she was editor of the school paper, president of her class for three years, student council president, representative to Girls' State, editor of the yearbook, recipient of a DAR good citizenship award, winner of a national essay contest sponsored by the Investors' League, and valedictorian of her graduating class. She scored in the 100th percentile on the statewide college aptitude test.

Laura's scholarship award covered board, room, and tuition. A local organization gave her $50 for books. She worked part-time for the rest of her expenses.

The University seemed Laura's natural element. She was consistently on the Dean's honor roll in the College of Arts and Sciences, where she was enrolled in a pre-medical course. She joined a few organizations in which she took a moderately active part. Much of her spare time was spent in painting, at which she became very proficient. Laura graduated with the B.S. degree in four years and then enrolled in medical school.

to offer complete curricula, and a few had rarely graduated students who went on to college.

Family backgrounds were also extremely diverse. There were families with a long and strong tradition of higher education. There were many others in which no member of the family had ever attended college, and a few in which neither parent had finished high school. Family attitudes ranged from urgency for enrollment in college through indifference to downright resistance, encountered in a few cases.

Joe was the oldest of five children. His father was a railroad section hand whose education stopped short of high school. His mother was a high school graduate. Joe's father assured the children he would see all of them through high school, but added that help toward college was obviously impossible. On the day Joe was recommended for a scholarship by his high school principal, he had gone to Albuquerque to enlist in the Navy. He had considered trying to work his way through college but had given that up as hopeless.

Joe was salutatorian of a very small high school class. He was recommended as "a solid and very conscientious student." His entrance tests at the University placed his aptitude a little below the average of his freshman class.

Joe's scholarship was the maximum $850. He worked during the summer as a laborer and saved $200.

Joe had some difficulty in adjusting to college life. He was shy and unduly modest and took little part in campus activities. His grades for the first semester were satisfactory, but began to slip on the second. With sufficient motivation he could have made a satisfactory record, but he did not return to the University for a second year.

The presence of three distinct cultures in New Mexico has been mentioned. No other state is multilingual in like degree. The group included four Indians; and for 97 of the 193 scholars Spanish was the language of the home, the street, and the school playground. It should not be assumed that these students were without proficiency in English. Many were remarkably proficient. But for some of them expression and comprehension in English were less facile than in their "native" tongue. In particular, students for whom English is not a first language are known to do less well on timed tests than they otherwise would have. The quantitative effect of this factor has not been evaluated successfully. Students of Spanish-language background cannot be tested in Spanish on subject matter which they have been taught in English. Indeed, for most of them Spanish is a language which is spoken, but very little read or written.

Patricia was encouraged by her family to hope for college, though without a specific plan. Her father, who was 74 years old, had an income in 1951 of $612. Her mother, who had been a teacher, was hopelessly ill. Patricia is the youngest of five children. Her tests indicated superior aptitude for college, and her high school record was substantially better than average. She was active in dramatics and was a member of the student council. Despite the family's difficulties, she maintained a fine, optimistic spirit.

Patricia's scholarship award covered board, room, and tuition. Through part-time work she earned enough to be completely independent of her family.

Patricia consistently maintained a high scholastic average. In addition, she earned a list of honors and credits too long to be recorded in full here. As a sophomore she was elected vice-president of Spurs, women's honorary, was a cabinet member of the United Student Christian Fellowship, and had a place on the Dean's honor roll in Business Administration. As a junior, she was secretary of the student council, president of her dormitory, a member of the student publications board, and winner of the Betty Hall Memorial Award as outstanding junior woman. In her senior year Patricia was a member of the Union program directorate and secretary of Phi Gamma Nu. She was elected to Who's Who in American Colleges and Universities, received the Alumni Association Award to the outstanding senior, was chosen as New Mexico's Maid of Cotton contestant, and was awarded a scholarship to the Katherine Gibbs School in New York City for 1956-57.

Aptitudes. In judging whether applicants possessed sufficient ability to do competent college work, the administrators took three factors into account. None of these was wholly reliable. Most credence was placed in the high school record, which reflects both aptitude and motivation. The difficulty here is that high school standards are widely variable, so that an "excellent" record from one school may not mean so much as a "good" record from another.

The second factor considered was a standard statewide college

Arturo was born and raised in Córdova, New Mexico, a small mountain village. His father was a house painter, who also relied on common labor to support his family. One of Arturo's older brothers also contributed his earnings. Neither parent was educated beyond the elementary level. Spanish was spoken exclusively in the home, and Arturo found it difficult, his first year at the University, to express himself fluently in English.

For his high school training Arturo entered the Menaul School, a Presbyterian mission school for Spanish-Americans and Indians. There he was identified by his fellow students as a leader. He represented Menaul at Boys' State and was the recipient of a valuable scholarship. His is a strong and dynamic personality. His scholastic aptitude, as measured by test scores, was below average, but his drive and doggedness enabled him to make good grades.

Arturo's awards from the Fund's scholarship program were minimal. He continued, as he had in high school, to earn much of his expenses. No help was obtained from his family. Arturo had little time for extra-curricular activities at the University but made many friends. He was consistently on the Dean's honor roll and graduated from the College of Education in four years.

aptitude test administered annually by the Counseling and Testing Services of the University of New Mexico to high school juniors throughout the State. This test was made up of an American Council on Education psychological examination for high school students and a test in reading comprehension and writing skills designed by the University of Chicago for statewide use in Illinois. For convenience, each student's raw score is converted to a percentile score, giving his rank among all students in New Mexico who took the test in the same year. These scores provide a useful check on high school transcripts, but they, too, have certain limitations. They do not reflect motivation. Students with phenomenally high scores have sometimes been found to have records of mediocre or poor performance in high school and have been known to fail in college. Conversely, students

Flora came from a typical Spanish background in a northern New Mexico town. Neither parent had more than an elementary education. There were three older children, all still living at home. At the inception of the Fund program, Flora had just declined a tuition scholarship at the University because it alone would not make enrollment possible. Through high school Flora had worked as a clerk and as a secretary. Her family was indifferent toward her ambition for college and had at one time been antagonistic.

Flora was valedictorian of her high school class. She took part in nearly every extra-curricular activity the high school offered and also became a competent stenographer.

Flora's scholarship was the maximum $850, covering board, room, and tuition. She earned the rest of her expenses by working in the Personnel Office and was very happy to be independent.

Flora entered eagerly into the swing of campus activities. She was an active member of the Newman Club for four years. In Phrateres she was social chairman in her freshman year, secretary as a sophomore, and president in her junior and senior years. She was a member of Spurs and Mortar Board, Phi Gamma Nu, and Pi Lambda Theta. She was active in World University Service and Campus Chest. In her sophomore and junior years Flora was on the Dean's honor roll in Education. She was honored by election to Who's Who in American Colleges and Universities.

with low scores have, through determined effort, done well at both levels. The scores are also somewhat unreliable in forecasting the academic success of students with Spanish-language backgrounds, who commonly do better than their test scores predict.

The third factor taken into account was the recommendations of the student's principal and teachers. These were valuable, but again with certain reservations. Appreciation of the student's qualities of character sometimes seemed to outweigh realistic considerations of academic aptitude and preparation. Moreover, some high schools had sent so few of their graduates to college that there was little basis in experience for evaluation of the student's college prospects.

It was inevitable that the smaller the high school from which these applicants came, the greater the uncertainty about the applicants' scholarship promise. Here, scholastic competition would be less severe, the schools would be less likely to participate in statewide and other testing programs, and experience with the college records of former graduates would be least extensive. But it is in small communities or rural areas that the economic problem is likely to be most severe. It seems probable that in any scholarship program emphasizing need as a primary factor in the awards there would be some inherent difficulty in evaluating aptitude.

Every successful applicant had a satisfactory high school record, and each had a strong recommendation from his high school. The distribution of statewide test scores is given in Table 7.

Table 7

DECILE DISTRIBUTION OF STATEWIDE TEST SCORES OF SCHOLARS
1952–53, 1953–54, 1954–55

	Number of Scholars in Decile										Number
Year	1	2	3	4	5	6	7	8	9	10	Untested
1952–53	1	0	3	3	4	2	8	12	7	14	20
1953–54	0	1	3	4	4	5	4	12	3	8	15
1954–55	0	1	0	1	1	6	6	8	7	10	22

It has been the experience of the University of New Mexico that a test score in the upper five deciles backed by a satisfactory high school record is a good indication of ability to do satisfactory work at that institution. When applicants with scores in the lower five deciles were accepted, there were extenuating factors, such as allowance for a language barrier, an exceptional high school record, or unusual evidence of motivation and determination. While, in general, the students with low test scores did less satisfactory college work, there were some significant exceptions. The only scholar with a test score in the lowest decile graduated on schedule with a B + average.

Academic Accomplishment. The methods of selection described in foregoing sections would be expected to produce a group of students of no more than average academic competence. This expectation was borne out by their performance. At the termination of the program

in June of 1956, the seniors at the University, to whom awards were made in 1952, had an average grade point average[1] of 1.77. The average for their class was 1.82. The juniors, who entered the program in 1953, had an average index of 1.53, vs. 1.64 for the class. The average index for the sophomores in the program was 1.47, somewhat better than the 1.39 average for their class. Among the scholars there were, however, some outstanding students.

Vocational Interests. An inventory of the vocational plans of the scholars at the University of New Mexico was taken at the time of their enrollment. The stipulation that they enroll in liberal arts curricula had, of course, a strong modifying effect on the range of careers mentioned. Eighty per cent of the scholars had at least tentative vocational plans. The others were undecided. An impressive 40 per cent indicated that they planned to become teachers, and among the others there were several who indicated preferences for the ministry, medicine, nursing, and similar vocations in social service. Results of the Strong Vocational Interest Test indicated that in general the vocational choices of the scholars were well founded.

The sample of students in this program is too small to warrant broad generalizations, but there is in the vocational choices of the scholars at least a hint that careers in teaching, and perhaps other fields of social service, are more attractive to the children of low-income families than to the children of the well-to-do. It may be that scholarship programs based primarily on need would help materially to increase the supply of teachers, nurses, social workers, and others dedicated to public service.

Counseling Procedures. The scholars received somewhat more intensive counseling, both academic and personal, than their fellow students. In addition to the normal procedures of testing and academic counseling at entrance, they were interviewed at intervals of a few weeks throughout the freshman year. Counseling contacts became more infrequent in successive years.

Social Attitudes and Problems of Adjustment. With few exceptions the scholars readily became adapted to college. The exceptions were

1. At the University of New Mexico a credit hour of "A" counts 3 points, an hour of "B", 2 points, and an hour of "C", 1 point. Grades of D and F count 0 points.

sometimes dramatic. One young man developed symptoms of hysteria in his freshman year. He visited the Dean of Men almost daily and occasionally suffered temporary amnesia. His problem was diagnosed by a psychiatrist as environmental shock. Patient counseling helped him work out of the difficulty. He graduated four years later with a B + average in Education and is now a successful rural teacher.

A girl from a ranch on the Mexican border was stubbornly resistant to wearing dresses. She had spent her life in blue jeans and saw no reason to comply with the dictum of the Dean of Women of her college that on certain occasions only dresses would do. She eventually was persuaded to conform.

Several of the scholars admitted homesickness in such terms as to suggest that their adjustment to the new environment of college was a rather severe problem.

Persistence of the Scholarship Group. As of the second semester of 1955-56, 52 of the 193 students who had been awarded scholarships during the program were still getting financial help from it. Fifty-eight others had been separated from the program but were still enrolled in college. Eighty-three were no longer enrolled. Table 8 summarizes the record of each group of scholars.

Table 8

ENROLLMENT STATUS OF SCHOLARS
Semester II, 1955–56

Year of Award	Initial Awards	Still Enrolled		Withdrawn from College
		With Aid	Without Aid	
1952–53	72	10	30	32
1953–54	60	12	15	33
1954–55	61	30	13	18
TOTALS	193	25	58	83

Of the group to whom awards were made in 1952-53, just over half graduated in four years. The record of persistence of the students who began in 1953-54 was much less impressive, and as of the termination of the program, it appeared that the group beginning in 1954-55 also would not match the record set by the first.

The reasons for discontinuing scholarship aid to those students

who, nevertheless, remained in college are given in Table 9. Under the heading "Reduced Program" are tallied six scholars who might have been retained in the program if unlimited funds had been available. As the program was "phased out" they were dropped on the grounds of marginal scholarship.

Table 9

REASONS FOR WITHDRAWAL OF SUPPORT FROM SCHOLARS WHO REMAINED IN COLLEGE WITHOUT IT

Year of Award	Increased Self-Support	Other Aid	Changed Schools*	Poor Grades	Reduced Program
1952–53	9	7	6	5	3
1953–54	3	4	4	3	1
1954–55	3	1	2	5	2
TOTALS	16	12	12	13	6

* Includes one student who shifted to an ineligible curriculum.

At the outset of the program it was hoped that as the scholars became accustomed to college work, some of them would be able to undertake to support themselves in increasing degree. As Table 9 shows, sixteen of them succeeded well enough to withdraw from the program altogether. In a larger number of instances stipends were reduced, but not completely withdrawn. In other cases scholars left the program to accept aid which for one reason or another seemed more attractive. Some of these qualified for athletic subsidies; others found scholarships which gave them wider latitude in the selection of curricula. Twelve transferred to colleges outside New Mexico. The details of their financial arrangements are unknown.

Of particular interest are the reasons for the withdrawal from college of the eighty-three scholars who dropped out after one or two years. These reasons, which are given in Table 10, are particularly significant because financial difficulty, usually thought to be the most important reason for withdrawal, was seldom a factor for this group. Thirty-six of the 193 scholars withdrew because of low grades. Most of these were suspended for academic reasons; a few were too discouraged by their low marks to continue. Fourteen, all of them women, married and left school. Two men who married continued their studies. Four of the scholars encountered family financial situa-

Table 10

REASONS FOR WITHDRAWAL OF SCHOLARS FROM COLLEGE*

Year of Award	Low Grades	Marriage	Lack of Interest	Financial Problems	Illness or Accident	Reason Unknown
1952–53	12	9	7	0	0	3
1953–54	17	4	6	2	2	2
1954–55	7	1	4	2	1	3
TOTALS	36	14	17	4	3	8

* One student, not represented in the table, entered military service.

tions which forced them to go to work. Three were required to withdraw because of illness or accident.

Seventeen of the scholars dropped out because of an expressed lack of interest in any further education. All of these were doing satisfactory work; several were better-than-average students. Almost without exception they came from homes in which the educational level was low and experience with college was completely lacking. The attitude of this group is typified by the parting comment of one of its members: "I have enjoyed my year at the University, but this is just not for me." Lack of motivation was an apparent cause, also, for a number of the academic failures. The conclusion that many of the scholars were over-persuaded to enroll in the program by teachers and friends was inescapable.

In much that has been said and written about the imperative need for greatly expanded scholarship programs there has been an assumption that the economic barrier is all that prevents capable high school graduates from enrolling in vastly greater numbers. There is no doubt that some capable students who earnestly desire college cannot afford it, but their number may be grossly over-estimated. The scholarship program described here uncovered two surprising situations: first, the number of applicants who could qualify on the basis of need and apparent ability was relatively quite small (see Page 24); second, many among those to whom awards were made lacked the essential motivation to do good work. Pending similar studies elsewhere, it is reasonable to conclude that a lack of orientation toward higher education, based on cultural factors, may be a greater barrier than financial need.

Attitudes of Scholars Toward the Program. The administrators of the program were interested in any possible adverse psychological

effects of the awards based, as they were, on the scholars' extreme need. So far as could be learned, there were none. The mood of nearly all the recipients seemed to be one of quiet acceptance of a deserved reward for past diligence and good behavior. In many high schools there is a well-developed attitude that college scholarships are the normal expectation for able students. Emotional reaction arises only when awards are not forthcoming.

There were some warmly appreciative letters of acceptance of the scholarships. It is interesting that, with one or two exceptions, there were no expressions of appreciation from parents, either written or oral.

From the point of view of the welfare of the students, the attitude described above was wholly desirable. Clearly, the awards carried no stigma, and the scholars were not made to feel that they were objects of charity.

Public Reception of the Program

In February of 1955 a letter was sent each high school principal in the State, announcing that funds would be unavailable for additional awards and that the scholarship program had, therefore, entered its terminal phase of continuing maintenance of those scholars already enrolled in it. Included in the letter was a request for a frank evaluation of the effects of the program on the high schools and the communities from which the scholars were drawn. There follows a series of typical excerpts from the letters received in reply.

> I would say the main contribution that the Ford Foundation scholarships had in this school and in this community was to serve as an incentive to capable students who felt like they might receive funds from the Foundation to further their education. . . . I believe that the students of rather outstanding ability worked harder than they normally would have to qualify for Ford Foundation scholarships.

> As we did not receive any of the scholarships, I feel that my evaluation would be of questionable value. No doubt it has done a great deal of good. My objection to the scholarship as set up is that we have to say that a student could not attend college without the

COOPERATING HIGH SCHOOLS

(*First Survey*)

Alamogordo
Artesia
Aztec
Belen
Blanco
Carrizozo
Carlsbad
Cathedral (Gallup)
Chama
Cimarron
Clayton
Cliff
Cloudcroft
Clovis
Deming
Des Moines
Dexter
Dora
Elida
Espanola
Estancia
Eunice
Farley
Farmington
Fence Lake
Field
Floyd
Forrest
Fort Sumner
Gadsden (Anthony)
Grady
Grenville
Hagerman
Hatch
Hobbs
Hope
Hot Springs
House
Hurley
Jal
Las Cruces
Las Vegas
Lordsburg
Los Alamos
Los Lunas
Lovington
Madrid
Magdalena
Maxwell
Melrose
Mora
Mountainair
Navajo Methodist (Farmington)
Ojo Caliente
Pojoaque
Portales
Quemado
Raton
Rehoboth Mission
Rogers
Rosedale
Roswell
Roy
Ruidoso
Sacred Heart (Clovis)
St. Michael's (Santa Fe)
St. Patrick's (Raton)
San Jon
Santa Fe
Santa Rosa
Socorro
Taos
Tatum
Tucumcari
Tularosa
Vaughn
Virden
Western (Silver City)

scholarship. This almost cuts out any student worthy of the scholarship. I think any student with enough on the ball can still make his own way through college. I think it should be left on the basis of need, without such a strong statement. Maybe if I knew the students who received the scholarships I would feel differently.

I have heard many favorable comments upon the aid that was given to our last year's graduates who would have been unable to attend college this year without it. The members of one church group gave a shower for one of the girls and seemed most grateful that she was to have a chance to continue her education—something no member of her family had ever considered. Other students had

worked in stores outside of school hours, and many business men inquire as to how they are progressing and express appreciation for the opportunities given them. As to the students themselves, all three of those receiving a Ford scholarship this year seem to feel a responsibility to make good use of it; they report on their work whenever possible and keep hoping to improve it.

Very poor report from me—unfortunately our students who were approved for grants did not use them; this despite the fact I questioned each candidate carefully concerning his or her plans or intentions. We have appreciated the efforts of your staff. Our only regret is that our students did not carry through.

We consider this program one of the finest scholarship programs this school has ever had the benefit of. We have been particularly fortunate in having three of our students attend college as a result of this scholarship. Each of them has done excellent work on the college level. Moreover, it has encouraged other students of our school to attain high scholastic marks so that they, too, might have a chance at the award. Aside from the immediate effect on our community, I believe that it has been excellently administered, accepting only the finest candidates and offering deserving students a real chance to continue their education. Standards for candidacy have been maintained at a high level and need for financial support has been a true consideration. —In brief, I regret very much that the program has terminated. It was a bright hope for the truly able but financially hindered students to continue their education.

I feel the Ford Foundation Scholarship Fund is a fine thing when properly supervised. I feel that fine supervision was given the two applicants we had. One of ours was dropped and the other one continued to go. Perhaps some money was lost on one, but the good received by the other and her achievements far over-balance the ill effects.

The wonderful thing about the program is that the students who are not Valedictorians or Salutatorians still had an opportunity to receive financial aid, and as you know, these students often do very well in college. I am sorry to learn that the program is to be curtailed.

In reply to your letter of February 4 concerning the Ford Scholarships, I am not in a position to evaluate the Ford Scholarships one way or another because we had three students apply for these scholarships and neither of the three were accepted. Since that time, two of those people have been able to remain in college because of other means while the third one withdrew from school and is now working here. To be right frank with you, I was rather disappointed at the time to think that not one of our students was given this opportunity. However, I suppose that as things turned out, you people that were concerned with the giving of the scholarships were two-thirds right and I one-third right. However, I would like to call your attention to the fact that since we have had no successful candidate, we are not in a position to judge the program.

Each year, beginning with 1952, from four to six students from this community have entered college on the Ford Scholarship Plan. We have checked and all of these students have been worthy of the confidence placed in them by those selecting the recipients of Ford Scholarships. Most of those students would not have been able to have started their college career had they not had the financial assistance. It is needless to say, then, that I have nothing but praise for the program and the way it has been administered in the State of New Mexico.

The scholarship program has worked as far as this community is concerned. We are positive that those students who have received the Ford Foundation Scholarship would not have been able to attend college had it not been available. It is arousing interest among our high school graduates, and it seems as though there are possibilities of more of our graduates attending college. The parents seem to have taken an interest, also, in seeing that their children further their education.

It has been our particular interest and pleasure to have had several recipients of the Ford Scholarship. To date those who have accepted this assistance have been doing creditable work in college. These large grants have made it possible for some of our most capable students to gain an education. I wish to express to you the appreciation of our students, community and school for making

such an opportunity possible. The program has been an inspiration for several good students to strive for even better grades with the possibility of winning a Ford Scholarship. Inasmuch as we have many very poor families in our rural area, we cannot begin to tell you what the Ford Scholarships have meant to our students. I personally feel it is a very good way to raise the educational standards of America, and I cannot visualize a more worthy philanthropy.

Summary

The benefits of the scholarship program were of several kinds. It brought about the enrollment in college of nearly 200 students who otherwise almost certainly would not have been able to attend. Approximately half of these students graduated. The attrition in this group was substantially less than that in the college population of New Mexico generally. It is still too early to assess the professional contributions of the scholars, but there seems little doubt that their enhanced value to society will far overmatch the expenditure of scholarship funds.

It is hoped that the experience reported here may be of value in the design of similar future programs. One rather startling discovery was the fact that the students of really high caliber with both the motivation and the requisite degree of need were extremely few in number (see Page 24).

There was ample testimony that the existence of the program encouraged some high school students to aspire to college who would not otherwise have done so. A continuing program would no doubt have been more effective in this regard.

The writers are persuaded that a scholarship program of this kind, desirable as it certainly is, cannot alone reach many of the youth who have high aptitudes for college but do not enroll. Some of these, indeed, do not finish high school, and for many others the senior year is too late for a favorable decision. Much earlier counseling and the development of a positive family attitude are as essential as the availability of financial support. In certain areas full orientation toward higher education will have to await the gradual lifting of the educational level of entire communities.

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III

THE FIRST SURVEY

Factors Influencing College Attendance

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The First Survey

FACTORS INFLUENCING COLLEGE ATTENDANCE

Purpose and Scope of the Survey

The purpose of this survey was to discover the higher educational status of a large number of New Mexico high school graduates within the year after their graduation, and to relate their college enrollment or nonenrollment to certain social and economic factors thought likely to have had some bearing on their choices. Data were collected in the fall of 1952 and the winter of 1953. The subjects of the survey were high school seniors who graduated from eighty high schools in May of 1952, and who presumably had better-than-average aptitudes for college. The criterion of aptitude was a score above the median on the 1950 statewide college aptitude test (see Page 32). While a superior score on this test is not a wholly reliable single predictor of success in college, it was a convenient means of defining the sample and had the advantage of uniform statewide applicability. Two disadvantages of using the test as a criterion are clear: (1) a number of high schools, usually small, did not participate in the 1950 testing program; (2) the test does not reveal the true aptitudes of students having bilingual backgrounds.

Information about the graduates was obtained from their high schools or from other sources in their home communities. It was found necessary to exclude the graduates of the two large Albuquerque high schools, which were unable to provide the information needed. Also excluded were the graduates of eighty-seven high schools, mostly small and rural, which did not participate in the statewide testing program. The Albuquerque graduates have immediate access to the University of New Mexico. Their rate of college enrollment is high. But for the graduates of nearly all the other

schools excluded from the survey, going to college involved the expense of living away from home. The effect of the combined exclusions was to leave a survey group approximately representative of the State as a whole, although roughly a third of the possible subjects were omitted.

Identification of the Survey Group

A total of 1742 graduates of eighty New Mexico high schools were identified as having scored above the median in the 1950 statewide college aptitude test. The test had been administered in the fall of their junior year of high school. Graduation came some twenty months later. For a variety of reasons, shown in Table 11, data for individual graduates were not always available. The desired information was obtained, however, for 1346 graduates, who make up the survey group. This was 27.5 per cent of the 1952 senior class in the public schools of New Mexico.

Table 11

IDENTIFICATION OF THE SURVEY GROUP

	Number	*Per Cent of Total*
Survey Group (data available)	1346	77.3
Moved to another New Mexico community before graduation	38	2.2
Left New Mexico	96	5.5
Moved away, location unknown	29	1.7
Deceased	4	0.2
Quit school before graduation	229	13.1
TOTALS	1742	100.0

When students had moved away from the community before graduation, no attempt was made to locate or find out about them. It is probable that the inclusion of this group, constituting less than 10 per cent of the potential sample, would not have materially affected the conclusions of the survey.

The number of students known to have quit school before graduation (229) is unexpectedly large. New Mexico law makes school attendance compulsory until the sixteenth birthday, which normally precedes or falls in the junior year. Weak students, especially, might be expected to withdraw because of lack of interest; greater persist-

ence would be expected from this more competent group. A study by Ivins,[2] covering the period of this survey, found overall drop-out rates averaging about 10.5 per cent each for the junior and senior years. These rates included drop-outs for the same causes as those listed in Table 11, which in this sample aggregate 23.1 per cent. Apparently the drop-out rate among the abler students is no lower, and may in fact be higher, than that among the less able.

Marriage is one of the principal causes of drop-outs, especially among girls. Ivins found that marriage was responsible for 5.3 and 2.8 per cent of the drop-outs among junior and senior boys, respectively. However, marriage caused 31.1 per cent of the drop-outs among junior girls and 44.1 per cent of those among senior girls.

Outline of Procedure

The data for each student in the survey group were obtained from one or more of the following sources: (1) an interview with the principal or guidance director of the high school from which the student graduated, (2) an interview with parents or relatives, (3) an interview with the student himself, (4) use of high school records, and (5) use of records on file in the Counseling and Testing Services of the University of New Mexico. An interview with the principal or guidance director was usually found to be sufficient. Other sources were used only when he could not supply the necessary information from knowledge of the community or from the records of the school.

The items of information were tabulated on master sheets, one for each student. Each item was then coded and transferred to a punch card. The correlations reported in the various tables and figures to follow were then developed by a mechanical sorting operation.

Some discrepancies will be noted in the totals given in the tables. In some instances single items of information were omitted because they were unavailable or inappropriate. For example, a parental occupation or educational classification was omitted if the parent was deceased or if the student was not living with his immediate family.

2. Ivins, *Student Marriages in New Mexico Secondary Schools*, The University of New Mexico Press, 1954.

Higher Educational Status of the Survey Group

By the time the data for this survey were taken, the members of the survey group had either enrolled in college or decided not to do so. Their choices are analyzed in Table 12. Included in the category "in college part-time" are 95 students who were enrolled in the White Sands cooperative work-study program (see Page 27). Among the 227 "in college with scholarship aid" were 70 supported by the scholarship program described in Part II. These two programs, in combination, substantially increased the rate of college matriculation in the year under study, accounting for about 22 per cent of the segment of the survey group which enrolled. Or to put the matter in another way, without the two programs the proportions of those enrolling and not enrolling might have been approximately reversed.

The most disturbing fact developed in Table 12 is that 38.6 per cent of the graduates with better-than-average aptitudes for college had neither enrolled nor made any plans to do so later. The reasons for their rejection of higher education will be discussed in a later section.

Table 12

HIGHER EDUCATIONAL STATUS OF THE SURVEY GROUP

Educational Status	*Number*	*Per Cent*
In college with scholarship aid	225	16.7
In college without scholarship aid	414	30.8
In college part-time	104	7.7
Planning to attend college later	84	6.2
Not planning to attend college	517	38.4
Undecided about college	2	0.2
Total in college	743	55.2
Total not in college	603	44.8

It is interesting to inquire whether, within the survey group, graduates of relatively high college aptitude are more likely to enroll than those of lower aptitude. In Table 13 the higher educational status of the group is correlated with percentile rank on the New Mexico statewide test.

In each of the categories of college enrollment the higher ranking students predominate. Conversely, those who did not plan to attend college had scores somewhat concentrated in the lower ranges.

Among those who plan to attend college later there are no discernible correlations with aptitude scores.

It is noteworthy that the numbers of graduates in the five deciles of Table 13 are unequal. In the survey group there are 103 more members with scores in the range 91-100 than in the range 51-60. Evidently, students with very high college aptitude scores are much more likely to finish high school than those with lower scores—hardly a surprising result.

Relation of Higher Educational Status to Various Environmental Factors

In this section, the higher educational status of the survey group is related to a number of social and economic factors of possible significance. Some of these are of obvious importance; others were suggested, in the course of the survey, by the data.

Family Income. In every study of this kind the economic barrier has been emphasized as one of the most important deterrents to college enrollment. While it may be that a student of high ability can still find a way to work his way through college without help from any quarter, a rare degree of self-denial and dedication is required.

The income levels of the families of the survey group range, as Table 14 shows, from $500 or less per year to figures in excess of $11,000. No high degree of accuracy is claimed for the income figures in individual cases. They are informed estimates based on a knowledge of the employment of the parents. It is not unlikely that they are occasionally too low. They are, however, almost certainly accurate enough to justify the general conclusions which will be drawn from them.

The raw figures of Table 14 are not very revealing; relationships are masked by variation in the numbers of graduates in the different income brackets. When, however, the numbers are converted to percentages of the total in each bracket, the bearing of family income is sharply defined. The percentages measure the probability of college enrollment (or nonenrollment) as a function of income. In three categories *in college with scholarship aid, in college without scholarship aid,* and *does not plan to attend college,* the effects of variation

Table 13

HIGHER EDUCATIONAL STATUS OF THE SURVEY GROUP IN RELATION TO APTITUDE AS MEASURED BY THE NEW MEXICO STATEWIDE TEST

(The percentages are based on the total number of students in each decile.)

Statewide test score (percentile rank)	In college with scholarship aid		In college without scholarship aid		In college part-time		Planning to attend college later		Not planning to attend college *		Totals	
	No.	*Per Cent*	*No.*	*Per Cent*	*No.*	*Per Cent*	*No.*	*Per Cent*	*No.*	*Per Cent*	*No.*	*Per Cent*
91-100	75	24.2	113	36.5	48	15.5	16	5.2	58	18.7	310	*100.0*
81-90	49	17.1	95	33.1	24	8.4	20	7.0	99	34.4	287	*100.0*
71-80	38	14.7	76	29.3	16	6.2	12	4.6	117	45.2	259	*100.0*
61-70	42	14.8	73	25.8	11	3.9	23	8.1	134	47.4	283	*100.0*
51-60	21	10.2	57	27.5	5	2.4	13	6.3	111	53.6	207	*100.0*
TOTALS	225		414		104		84		519		1346	

* For convenience, the two graduates reported in Table 12 as undecided about college have been included under the heading "Not planning to attend college" in this and the other tables in this section.

Table 14

HIGHER EDUCATIONAL STATUS OF THE SURVEY GROUP IN RELATION TO FAMILY INCOME

Annual family income	In college with scholarship aid		In college without scholarship aid		In college part-time		Planning to attend college later		Not planning to attend college		Totals	
	No.	*Per Cent*	*No.*	*Per Cent*	*No.*	*Per Cent*	*No.*	*Per Cent*	*No.*	*Per Cent*	*No.*	*Per Cent*
$0-500	2	*14.3*	1	*7.1*	0	*0*	0	*0*	11	*78.6*	14	*100.0*
$501-2,000	21	*17.2*	10	*8.2*	4	*3.3*	12	*9.8*	75	*61.5*	122	*100.0*
$2,001-3,500	55	*18.6*	42	*14.2*	30	*10.1*	28	*9.5*	141	*47.6*	296	*100.0*
$3,501-5,000	58	*16.8*	87	*25.1*	25	*7.2*	29	*8.4*	147	*42.5*	346	*100.0*
$5,001-6,500	42	*16.9*	100	*40.2*	24	*9.6*	9	*3.6*	74	*29.7*	249	*100.0*
$6,501-8,000	22	*21.4*	42	*40.8*	5	*4.8*	5	*4.8*	29	*28.2*	103	*100.0*
$8,001-9,500	9	*23.1*	19	*48.7*	1	*2.6*	0	*0*	10	*25.6*	39	*100.0*
$9,501 11,000	2	*10.5*	10	*52.6*	3	*15.8*	0	*0*	4	*21.1*	19	*100.0*
$11,001-higher	16	*10.7*	103	*68.6*	6	*4.0*	0	*0*	25	*16.7*	150	*100.0*
											1338	

in income are particularly striking. These are shown graphically in Figure 2.

Scholarship awards made in 1952 appear to have been distributed evenly among families of all levels of income except the very lowest and the highest. However, the Fund-sponsored program (Part II) accounted for the bulk of the awards in the low-income brackets. When allowance is made for these, it is evident that the probability of other scholarship awards is at a maximum in families having incomes between $5000 and $9500. The existence of the Fund-sponsored program, with its emphasis on the very needy, no doubt channeled some other scholarship funds to students with lesser degrees of need. There is reason to doubt, however, whether in the absence of the program more than a few awards would have been accepted by students with family incomes below $3500. Scholarships of the order of $100 to $200 do little toward solving the financial problem in such families.

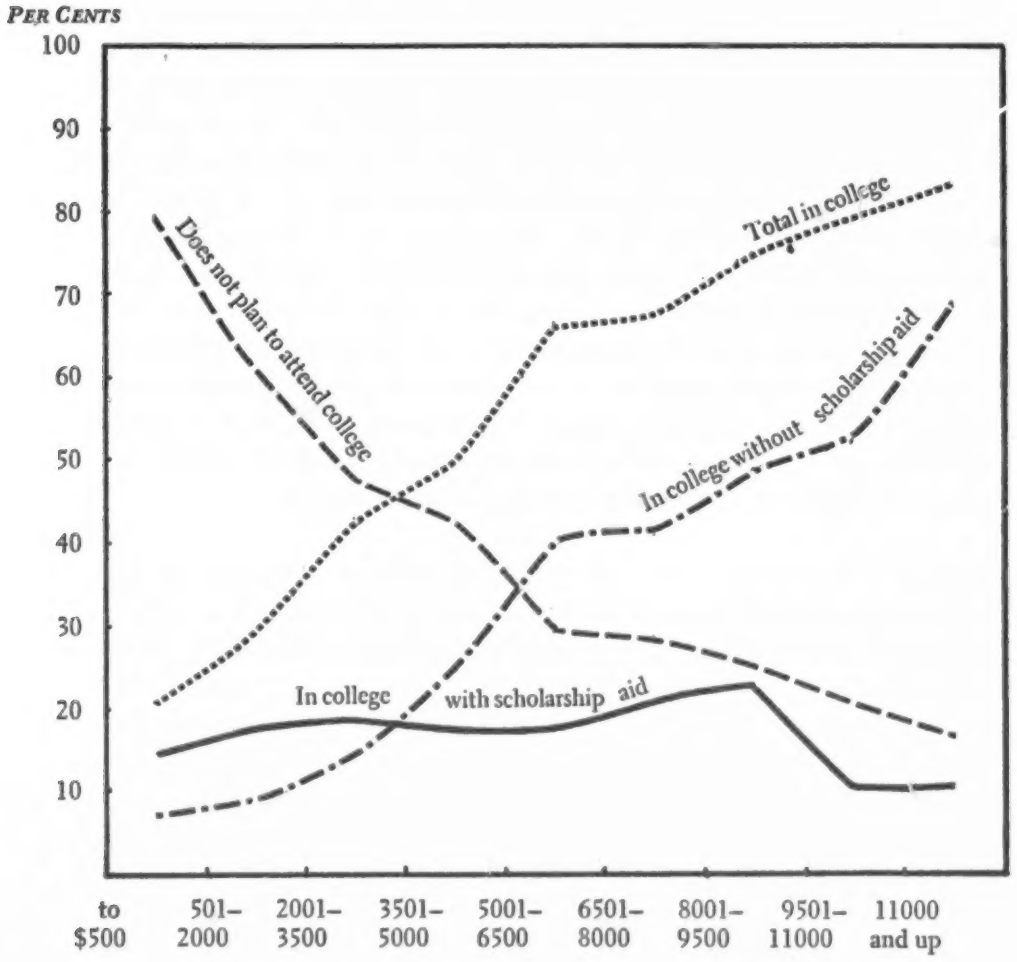
Among those graduates who enrolled in college without scholarship aid the percentages increase in almost direct proportion to family income. An income below $5000 is strongly deterrent to enrollment. At higher income levels the likelihood of enrollment increases progressively with income.

The graduates who enrolled part-time came from families at all levels of income except the very lowest. All but nine of these were enrolled in the White Sands cooperative work-study program, where their earnings made them independent of family support.

Those who planned to attend college later had family incomes concentrated in the lower brackets. The absence of any member of this group at the higher-income levels is significant. All these graduates were oriented toward college. For them the financial limitation was almost certainly the most significant one.

The decision not to attend college at all is most probable among persons of the lowest level of family income and becomes steadily less likely as that income increases. As Figure 2 shows, the curve for this group steadily declines throughout its length. It is interesting that even at clearly adequate levels one-sixth to one-third of the graduates decided against college. Evidently, a lack of money is not the only barrier to higher education, even among those with the necessary aptitude.

FIGURE 2



Dependence of College Attendance on Family Income

In Figure 2 the combined percentages of the graduates in each family income bracket who enrolled in college under any circumstances are plotted against incomes. The resulting graph definitely establishes for this group the overall association between college attendance and financial competence, which has been noted so often. The percentages range from 21.4 per cent of the lowest income group to 83.3 per cent of the highest. At a family income level of $3500-$5000 the chances that a graduate will decide for or against college are even. At the $5000-$6500 level the probability of enrollment rises very sharply to 66.7 per cent and increases gradually at successive higher income levels. The sharp up-break in the curve between the two salary levels just mentioned is logical from more than one point of view. The $5000-$6500 income level is the first in the increasing series in which there is an appreciable amount of money which can be used for any purpose other than family maintenance. But, of perhaps equal significance, this is the salary threshold of the professional and managerial class, in which the values of higher education have complete acceptance.

Parental Occupation. The bearing of parental occupation on the higher educational status of the survey group is developed in Tables 14 and 15. The employment categories need little definition. "Agricultural" was confined to self-employed farmers or ranchers. Farm or ranch help was classified as "unskilled labor." "Service" was narrowly defined to include policemen, waitresses, housekeepers, janitors, etc. Domestic help was also regarded as "unskilled labor."

Table 15 shows clearly that the father's occupation had no very significant relationship either to the distribution of scholarships or to the probability that a graduate would attend college part-time (eighty-one of ninety in this category were in the White Sands program) or plan to attend college later. However, among those in college without scholarship aid, the maximum percentage is found in the group whose fathers are classified as managerial or professional. The minimum percentage is produced by the group whose fathers are unskilled laborers. In the group having no plans for college, just the reverse was true. A child of a managerial or professional father was more than four times as likely to enroll in college without aid as was an unskilled laborer's child. The latter was more than three times as likely as the former to decide against college altogether.

Table 15

HIGHER EDUCATIONAL STATUS OF THE SURVEY GROUP IN RELATION TO FATHER'S OCCUPATION

Father's occupation	In college with scholarship aid		In college without scholarship aid		In college part-time		Planning to attend college later		Not planning to attend college		Totals	
	No.	*Per Cent*	*No.*	*Per Cent*	*No.*	*Per Cent*	*No.*	*Per Cent*	*No.*	*Per Cent*	*No.*	*Per Cent*
Managerial or professional	40	*16.6*	134	*56.0*	15	*6.2*	8	*3.3*	43	*17.9*	240	*100.0*
Clerical or sales	26	*16.8*	60	*38.7*	15	*9.6*	8	*5.1*	46	*29.8*	155	*100.0*
Agricultural	37	*15.6*	80	*33.7*	9	*3.8*	15	*6.4*	97	*40.5*	238	*100.0*
Service	5	*18.5*	7	*26.1*	3	*11.0*	2	*7.4*	10	*37.0*	27	*100.0*
Skilled labor	49	*18.0*	65	*23.8*	22	*8.1*	21	*7.7*	116	*42.4*	273	*100.0*
Unskilled labor	40	*16.8*	30	*12.6*	24	*10.0*	16	*6.8*	128	*53.8*	238	*100.0*
Unemployed	8	*27.6*	5	*17.2*	1	*3.4*	4	*13.8*	11	*38.0*	29	*100.0*

It is arguable that the father's occupation is without influence on the choice for or against college except as it affects family income. This would appear to be borne out by the fact that when scholarship aid is sufficient, or when the student can earn his way, parental occupation seems to be without influence on the probability of enrollment. On the other hand, the children of skilled laborers and of farmers decided against college in greater relative numbers than the children of clerical and sales personnel, whose typical incomes are smaller. It is reasonable to infer that in the families of farmers and skilled laborers there is a tendency to follow the fathers' occupations and to rule out higher education as unnecessary.

The effect of the mother's occupation on higher educational status (Table 16) is less significant. Of the 1292 mothers recorded, 1043 were housewives, otherwise unemployed. In families with employed mothers college attendance was most likely when the mother worked in a managerial or professional capacity, least likely when her employment required little skill.

Parental Education. A family tradition of higher education, or family experience with it, would be expected to encourage the college enrollment of sons and daughters. Tables 17 and 18 show the effects of parental education on the higher educational status of the survey group. As could be predicted in the light of the data already presented for the survey group, there is a strong correlation between college enrollment and the educational attainments of the parents. Of those whose fathers did not complete high school, only 38.9 per cent enrolled in college. But 81.3 per cent of the children of college-graduate fathers enrolled. The highest percentage of enrollment in Table 17, 86.4 per cent, is identified with the group whose fathers attended college but did not graduate.

Examination of Table 18 reveals two interesting situations. First, mothers of the survey group were nearly as highly educated as the fathers. This is surprising in view of the strong preponderance of men in colleges now and in the past. Second, there is a slightly stronger correlation of college enrollment with the mother's educational attainment than with the father's.

The various environmental factors discussed so far—family income, parental occupation, and parental education—are not wholly independent variables. The well-educated professional man can

Table 16

HIGHER EDUCATIONAL STATUS OF THE SURVEY GROUP IN RELATION TO MOTHER'S OCCUPATION

Mother's occupation	In college with scholarship aid		In college without scholarship aid		In college part-time		Planning to attend college later		Not planning to attend college		Totals	
	No.	*Per Cent*	*No.*	*Per Cent*	*No.*	*Per Cent*	*No.*	*Per Cent*	*No.*	*Per Cent*	*No.*	*Per Cent*
Managerial or professional	20	24.7	38	47.0	6	7.4	3	3.7	14	17.2	81	100.0
Clerical or sales	25	20.7	38	31.4	17	14.0	10	8.3	31	25.6	121	100.0
Service	1	2.9	7	20.7	0	0	1	2.9	25	73.5	34	100.0
Skilled	1	12.5	2	25.0	0	0	0	0	5	62.5	8	100.0
Unskilled	0	0	0	0	0	0	0	0	5	100.0	5	100.0
Housewife	173	16.8	315	30.5	76	7.5	66	6.4	413	38.8	1043	100.0

Table 17

HIGHER EDUCATIONAL STATUS OF THE SURVEY GROUP IN RELATION TO FATHER'S EDUCATION

Father's Education	In college with scholarship aid		In college without scholarship aid		In college part-time		Planning to attend college later		Not planning to attend college		Totals	
	No.	*Per Cent*	*No.*	*Per Cent*	*No.*	*Per Cent*	*No.*	*Per Cent*	*No.*	*Per Cent*	*No.*	*Per Cent*
Did not complete high school	76	*14.9*	82	*16.1*	40	*7.9*	43	*8.5*	268	*52.6*	509	*100.0*
Completed high school but did not attend college	82	*16.8*	17[illegible]	*[illegible]6.2*	38	*7.8*	28	*5.7*	164	*33.5*	489	*100.0*
Attended college but did not graduate	21	*35.0*	26	*43.4*	5	*8.3*	3	*5.0*	5	*8.3*	60	*100.0*
Graduated from college	32	*17.1*	111	*59.4*	9	*4.8*	5	*2.7*	30	*16.0*	187	*100.0*
											1245	

Table 18

HIGHER EDUCATIONAL STATUS OF THE SURVEY GROUP IN RELATION TO MOTHER'S EDUCATION

Mother's Education	In college with scholarship aid		In college without scholarship aid		In college part-time		Planning to attend college later		Not planning to attend college		Totals	
	No.	*Per Cent*	*No.*	*Per Cent*	*No.*	*Per Cent*	*No.*	*Per Cent*	*No.*	*Per Cent*	*No.*	*Per Cent*
Did not complete high school	64	*13.1*	76	*15.6*	32	*6.5*	39	*8.0*	277	*56.8*	488	*100.0*
Completed high school but did not attend college	101	*17.6*	195	*33.9*	50	*8.7*	36	*6.2*	193	*33.6*	575	*100.0*
Attended college but did not graduate	21	*26.6*	38	*48.1*	5	*6.3*	3	*3.8*	12	*15.2*	79	*100.0*
Graduated from college	37	*20.4*	102	*56.3*	15	*8.3*	5	*2.8*	22	*12.2*	181	*100.0*
											1323	

supply his children not only with an orientation toward college but with the means for it. The unskilled laborer who did not complete high school can provide neither. These data do not furnish a basis for finding the relative weights of the cultural and economic factors, whose influences usually run parallel.

Access to College. A final environmental factor which might be expected to influence strongly the decision for or against higher education is the accessibility of a college within commuting range of the high school graduate's residence. In Table 19, accordingly, the numbers of the several categories of students carried in the preceding tables are divided between those who lived within forty miles of a four-year, state-supported college and those who lived at a greater distance. The New Mexico Military Institute, located in Roswell, is excluded because of its specialized nature. Also excluded are the two parochial colleges in Santa Fe and Albuquerque. The inclusion of these three colleges would have increased somewhat the proportion of those within commuting range.

Of the 1322 members of the survey group for whom the requisite information was recorded, 370 lived within commuting distance of college; 952 did not. Table 19 shows, as would be expected, that ready access to a college enhanced the probability of college attendance. The percentages of those enrolled in college full-time are larger in each category for the commuting group. But the differences between the percentages for the commuting and noncommuting sub-groups are surprisingly small.

In the fourth row of Table 19 are shown the numbers of noncommuting graduates who would have appeared in each category if this group had followed precisely the distribution for the commuting group. These numbers are calculated by applying the percentages for those who could commute to the total number, 952, who could not. The last row of Table 19 records the number of noncommuters in each category whose choices might have been different if they had followed the pattern of the commuters. Twenty-three would have been in college with scholarship aid, and thirty-two without it. On the other hand, twenty-six would have enrolled full-time instead of part-time, four would have attended college immediately instead of later, and twenty-seven who did not plan to attend college would have done so. Apparently, the college plans of fifty-five to fifty-seven

Table 19

HIGHER EDUCATIONAL STATUS OF THE SURVEY GROUP IN RELATION TO ACCESS TO COLLEGE

Accessibility of a state-supported college	In college with scholarship aid		In college without scholarship aid		In college part-time		Planning to attend college later		Not planning to attend college		Totals	
	No.	*Per Cent*	*No.*	*Per Cent*	*No.*	*Per Cent*	*No.*	*Per Cent*	*No.*	*Per Cent*	*No.*	*Per Cent*
Within commuting distance	68	*18.4*	123	33.2	22	*5.9*	22	*5.9*	135	*36.5*	370	*100.0*
Not within commuting distance	152	*16.0*	284	29.8	82	*8.6*	60	*6.3*	374	39.3	952	*100.0*
TOTALS	220	*16.6*	407	30.8	104	*7.9*	82	*6.2*	509	38.5	1322	*100.0*
Redistribution of non-commuters according to percentages for commuters	175		316		56		56		348		951	
Changes in numbers of non-commuters in redistribution	+23		+32		−26		−4		−27			
		+55						−57				

graduates would have been affected. This is about 6 per cent of the whole noncommuting group of 952.

There were two principal reasons for enhanced college attendance in the vicinity of a state-supported institution. One is the somewhat intangible orientational influence of the presence of the institution on the community. A youngster growing up near a college knows and hears more about it. He is probably acquainted with some of its students and perhaps with some of its faculty. College, therefore, becomes more conceivable as an opportunity for him.

The second reason is, of course, financial. For the student who can live at home and commute to school the cost exceeds that of high school by the amount of the college tuition plus, perhaps, an allowance for a somewhat greater commuting cost. In New Mexico at the time of the survey, this amounted to $300-$400 per year, which the student could easily earn through summer or part-time employment. Few commuting students, unless they had to help support their families, could be said to face a financial barrier to college enrollment.

It follows that the financial barrier for the noncommuting students was significant for approximately 6 per cent, if the intangible orientational influence of the proximity of a college is discounted altogether. Of the whole survey group 38.5 per cent decided against college. More than 30 per cent, according to this line of reasoning, decided for other than financial reasons.

The Members of the Survey Group Who Did Not Plan to Attend College

In view of the findings set forth in the preceding section, the reactions of 517 members (38.4 per cent) of the survey group who did not plan to enroll are particularly interesting. All had graduated from high school; all had better-than-average aptitudes, yet none entered college in the fall after graduating or planned to do so later. The reason for the negative decision made by each of these graduates was sought. Answers were obtained from fellow students, parents, and school personnel.

Some of the more obvious reasons, such as "marriage" or "financial need," were expected. But the list of reasons was not predetermined;

it was allowed to grow as responses were tabulated. While a wide variety of reasons was given, only a few were of high incidence, as Table 20 shows.

The first two answers listed, accounting for only 9.9 and 6.0 per cent of the total, respectively, relate directly to financial limitation. It is possible that some of the graduates were reluctant to admit their restricted circumstances, and that the reasons they gave were really secondary. Certainly most of them realized that college would entail a financial struggle. But there is no proof that the reasons given should not be accepted at face value. Correlation of the "reasons" with the family incomes of the graduates reveals that those "needed at home to complete family income" or those "financially unable to attend college" came almost totally from families with incomes of less than $5000 per year. More than half in these categories had annual family income of less than $2000.[3] (See Table 21.) Those giving the reasons "do not like school" or "would rather work than continue school" came largely from families with average incomes. Those "enlisted in the armed services" had family incomes ranging generally downward from the average. The graduates who chose "marriage" instead of college, nearly all girls, came from families having an income distribution not significantly different from that for the whole survey group. The same is true of those who "enrolled in a vocational school." The group making an unspecified "personal choice" appears to have a somewhat better-than-average income distribution. The other "reasons" were not given by enough subjects to warrant valid correlations.

The data of Table 21 suggest that, while the financial barrier to college enrollment is very significant, especially at the lowest levels of income, there are several other factors of no less weight. Among these additional factors a desire to become independent and a dislike of school are strong deterrent influences. By far the strongest, however, is marriage, which accounted for almost 30 per cent of the choices. Implicit in much of the reasoning of those not planning to attend college is a lack of conviction that higher education is particularly valuable. This indifference, whatever its origins, may well be a more significant deterrent than a lack of money.

3. Forty-seven per cent of the graduates in these first two categories were children of broken homes. For the entire group not planning to attend college, the incidence of broken homes was 23.8 per cent.

Table 20

FREQUENCY OF REASONS GIVEN BY THOSE NOT PLANNING TO ATTEND COLLEGE

Reason	*Boys*	*Girls*	*Both*	*Per Cent of Total*
"Needed at home to complete family income"	22	29	51	9.9
"Financially unable to attend college"	7	24	31	6.0
"Do not like school"	35	14	49	9.5
"Would rather work than continue school"	22	32	54	10.3
"Have a job that requires no further education"	4	2	6	1.2
"Ill health"	1	3	4	0.8
"Marriage"	10	143	153	29.6
"Enrolled in a vocational school"	8	41	49	9.5
"Enlisted in the armed services"	53	5	58	11.2
"Family opposed to higher education"	1	1	2	0.4
"Personal choice" *	26	34	60	11.6
TOTALS	189	328	517	100.0

* This category includes a variety of responses too diverse to classify.

Table 21

REASONS GIVEN BY THOSE NOT PLANNING TO ATTEND COLLEGE IN RELATION TO FAMILY INCOME

Reason	$0–500	$501–2000	$2001–3500	$3501–5000	$5001–6500	$6501–8000	$8001–9500	$9501–11,000	$11,000–over
"Needed at home to complete family income"	4	31	12	3	1	0	0	0	0
"Financially unable to attend college"	2	7	14	7	1	0	0	0	0
"Do not like school"	0	1	20	12	7	4	0	1	2
"Would rather work than continue school"	0	1	17	20	12	2	0	0	2
"Have a job that requires no further education"	0	1	3	0	0	1	0	0	0
"Ill health"	0	0	2	0	1	0	0	0	1
"Marriage"	1	16	32	50	22	9	6	2	15
"Enrolled in a vocational school"	0	3	14	16	8	6	2	0	1
"Enlisted in the armed services"	3	12	13	20	7	1	0	0	1
"Family opposed to further education"	0	1	1	0	0	0	0	0	0
"Personal choice"	1	1	11	17	15	6	2	1	3
TOTALS	11	74	139	145	74	29	10	4	25
Percentage distribution of incomes, this group	2.1	14.5	27.2	28.4	14.5	5.7	1.9	0.8	4.9
Percentage distribution of incomes, entire survey group	1.0	7.2	22.2	25.9	18.6	7.7	2.9	1.4	11.2

Table 22

FREQUENCY OF REASONS GIVEN BY THOSE PLANNING TO ATTEND COLLEGE LATER

Reason	*Boys*	*Girls*	*Total*	*Per Cent*
Health	2	5	7	8.9
Enlisted in armed services to obtain educational benefits	11	0	11	13.9
Parents presently unfavorable toward college	1	2	3	3.8
Working for money with which to attend college	19	36	55	69.6
Financially able, but working for experience or additional money	0	3	3	3.8
TOTALS	33	43	79	100.0

Those Who Plan to Attend College Later

Eighty-four of the members of the survey group indicated plans to attend college later (Table 12). Reasons for this decision were reported in seventy-nine cases and are classified in Table 22. As might be expected, the reasons for deferring college enrollment are overwhelmingly financial. The family incomes of this group were virtually limited to the $500-$6500 range and heavily concentrated between $2000 and $5000.

Summary and Conclusions

Each of the environmental factors analyzed in the survey correlates, as would have been predicted, with the record of college enrollment of the survey group. As in all comparable studies, family income appears to be a dominant factor. Yet there is evidence that the financial barrier was really insurmountable for a comparatively small segment of the graduates surveyed. Table 19 indicates that fifty-five to fifty-seven students, or about 6 per cent of those who could not commute to college, may have failed to enroll for that reason. This is about 4.2 per cent of the total survey group. Those who gave financial reasons for not planning to attend college numbered eighty-two, which is only 6.2 per cent of the total. (See Table 20.)

It is reasonable to conclude that, while family income is an excellent *index* of the probability of college enrollment, it may be much over-rated as a determining *factor*. A reason suggested often in the foregoing discussion is that more subtle cultural factors, stemming from parental education and occupation, run parallel to family income and augment its apparent influence. The cultural barrier to higher education may indeed be substantially higher than the financial. (See also Pages 23-28.)

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IV

THE SECOND SURVEY

Factors Deterring Superior Students from College Attendance

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The Second Survey

FACTORS DETERRING SUPERIOR STUDENTS FROM COLLEGE ATTENDANCE

Purpose and Scope of the Survey

This survey was conducted in 1954. Its subjects were those who, as high school juniors, scored in the upper quartile on the New Mexico statewide college aptitude test administered in 1951-52.[4] Graduation from high school normally would have occurred for this group in the spring of 1953. Survey data were collected approximately one year later.

The purpose of the survey was to learn what proportion of this exceptionally promising group of high school students entered college and, especially, why those who did not enroll failed to do so. Of particular interest are the results of interviews with a substantial number of graduates who chose, without obvious reasons, to turn to available employment rather than to higher education.

The total number scoring in percentiles 75-100 on the statewide test was 1079. Table 23 shows their higher educational status some twenty-six months later, when those who enrolled in college would have been freshmen. Nearly 60 per cent were known to have enrolled. A scant fourth definitely did not. Inevitably, after a lapse of two years many of the students could not be located. Of the 180, or 16.7 per cent, in this category, 132 had moved away from the community in which they took the test. Forty-eight did not finish high school.

4. The test is described on Page 32.

Those Who Went to College

In Table 24 the distribution of scholarship aid among the 646 subjects known to be enrolled in college is related to their test scores. The scores are divided into three percentile ranges: 75-84, 85-94, and 95-100, in order to emphasize the status of the latter group, those of very superior aptitude. This table also compares the distribution of students in each range of scores in New Mexico colleges and those in other states. Nearly one third (205) of the graduates who enrolled in college left the State to do so. Of these, forty-four received scholarships. Of the 441 who enrolled in New Mexico colleges, 150 (or more than one third) had scholarship aid. Among those who left the State with scholarships, those with very superior test scores seem to have been given some preference; but scholarships in the New Mexico colleges were awarded as freely in the lowest as in the highest aptitude ranges. It is reasonable to assume that any score in the upper quartile was considered satisfactory if backed by a strong high school record. Moreover, many scholarships, notably those described in Part II of this report, were based more on need than on exceptional aptitudes.

Those Who Did Not Enroll

Of greater interest for the purposes of this survey were the graduates who did not enroll in college in the year following graduation from high school. The occupations of 253 who could be located are classified in Table 25. Marriage claimed 113, or 43.5 per cent, all of them girls. Forty-three, or 17.5 per cent, had entered military service. Some of these might be expected to enroll in college later. Twenty-six, or 10.5 per cent, were enrolled in vocational schools. In New Mexico such institutions are almost exclusively secretarial schools or business colleges. Sixty-nine graduates, who were classified as employed, are the subjects of the remainder of this study.

The Study Group

Interviews were sought with the sixty-nine employed graduates, who were scattered about New Mexico. Twenty-eight either could

Table 23

HIGHER EDUCATIONAL STATUS OF THE TOTAL SURVEY GROUP

	Known to be in college	Known not to be in college	Did not graduate or status unknown	Totals
Boys	349	92	76	513
Girls	297	161	104	566
TOTALS	646	253	180	1079
Percentages	*59.9*	*23.4*	*16.7*	*100.0*

Table 24

DISTRIBUTION OF SCHOLARSHIP AID TO MEMBERS OF THE SURVEY GROUP IN RELATION TO STATEWIDE TEST SCORES

(Percentages in Italics)

Percentile rank on statewide test	Enrolled in New Mexico		Enrolled in other states		Totals
	Without a scholarship	With a scholarship	Without a scholarship	With a scholarship	
95-100	68	39	35	13	155
	43.9	*25.1*	*22.6*	*8.4*	*100.0*
85-94	147	67	81	21	316
	46.5	*21.2*	*25.6*	*6.7*	*100.0*
75-84	76	44	45	10	175
	43.4	*25.0*	*25.9*	*5.7*	*100.0*
TOTALS	291	150	161	44	646
	441		205		
	68.3		*31.7*		*100.0*

Table 25

OCCUPATIONS OF MEMBERS OF THE SURVEY GROUP WHO DID NOT ENROLL IN COLLEGE

Percentile rank on statewide test	Married (girls only)	Physically unable to attend college	In military service	Enrolled in vocational schools	Employed	Totals
95-100	19	0	9	4	8	40
85-94	48	1	19	13	25	106
75-84	46	1	15	9	36	107
TOTALS	113	2	43	26	69	253
Percentages	*43.5*	*0.5*	*17.5*	*10.5*	28.0	*100.0*

SECOND SURVEY

NAME..... PRESENT ADDRESS.....
GRADUATE OF.....HIGH SCHOOL

1. What is your present title or what is the nature of your present occupation?
2. Do you enjoy this type of work?.....
3. Are you planning your future in this type of work?.....
   If not, what is your occupational objective?.....
4. How do you plan to reach this occupational objective?.....
5. Have you ever considered attending college during the one year that you have been out of high school?.....
6. Are you now working for the money to attend college?.....
7. If you do have the opportunity to attend college, what course of study do you plan to follow?.....
8. What schools have you considered for this work?.....
9. What was the primary reason for your not attending college this past year?
10. Did you like high school?.....
11. What was your favorite subject in high school?.....
12. Do you feel that you worked to the best of your ability in high school?....
13. Did you make application for a scholarship to college while in high school? ..... Where?.....
14. Were you offered a scholarship?.....
    If yes, why didn't you take advantage of this opportunity?.....
15. Would you consider a scholarship now?.....
16. What is your father's occupation?.....
17. Is your mother working?.....
18. Are they willing to assist you financially if you go to college?.....
19. Do you have any brothers or sisters in college?.....
    Where? .....
    Do they receive aid from your parents?.....
20. What was the highest educational achievement of your mother?.....
    Father?.....

Remarks:

not be located or were working at remote and inaccessible jobs. Questionnaires were mailed to all twenty-eight, but there were no returns. Forty-one of the graduates, fifteen boys and twenty-six girls, were interviewed. These constitute the study group for the balance of this report.

The specific occupations of the study group are tabulated below:

BOYS		GIRLS	
Apprentice electrician	1	Stenographer	12
Apprentice mechanic	1	Bookkeeper	5
Apprentice printer	1	Receptionist	1
Apprentice railroader	2	Cashier	1

Apprentice telephone repairman	1	I.B.M. operator	1
Sales clerk	3	Bank teller	1
Farmer	3	Telephone operator	3
Service station attendant	1	Sales clerk	1
Temporarily unemployed	2	Radio script writer	1

A cursory review of the above lists indicates that the girls were employed in better and more responsible jobs than the boys. There are indications that the girls may have conceived their high school education as terminal and, therefore, obtained from it a higher degree of specific job preparation.

Occupational and Educational Objectives of the Study Group

The questionnaire used in interviewing the study group was designed to ascertain the members' vocational objectives and attitudes toward higher education. Sometimes attitudes were revealed by a comparison of answers to two or more questions.[5] The following tabulations list for each student his occupation at the time of the interview, his ultimate vocational objective, and his plan for the preparation needed to reach his goal.

BOYS

Occupation	*Vocational Objective*	*Preparation*
Apprentice electrician	Electrician	Trade experience
Apprentice mechanic	Mechanic	Trade experience
Apprentice printer	Farmer	Trade experience (sic)
Apprentice railroader	Railroader	Trade experience
Apprentice railroader	Electronic engineer	College
Apprentice telephone repairman	Electronic supervisor	Trade experience
Sales clerk	Undecided	
Sales clerk	Salesman	Experience
Sales clerk	Geologist	College
Farmer (3)	Farmer (3)	Experience
Service station attendant	Engineer	College
Unemployed	Railroader	Trade experience
Unemployed	Armed services	Enlistment and experience

5. See boxed questionnaire on Page 77.

GIRLS

Occupation	*Vocational Objective*	*Preparation*
Stenographer-secretary (8)	Secretary (8)	Experience
Stenographer-secretary	Musician	College
Secretary	Airline hostess	Experience
Secretary	Teacher	College
Secretary	Home economist	College
Bookkeeper (3)	Bookkeeper (3)	Experience
Bookkeeper	Sales representative	Experience
Bookkeeper	Musician	College
Receptionist	Musician	College
Cashier	Cashier	Experience
I.B.M. operator	Secretary	Experience
Bank teller	Secretary	Experience
Telephone operator (2)	Telephone operator (2)	Experience
Telephone operator	Secretary	College
Sales clerk	Accountant	College
Radio script writer	Radio script writer	Experience

Ten of the forty-one members of the study group recognized college as a necessary step to their vocational objectives. Eight boys and fifteen girls were already employed in jobs which would lead directly to their vocational objectives through further experience. The remaining eight wished to change direction but did not consider college essential. Those who were employed in jobs requiring a maximum of skill (apprenticeships and clerical jobs) usually wished to remain in them and advance through experience. At this stage, after having worked one year, nearly all were realistic about their situations and future plans.

Why They Did Not Attend College

The reasons given by the members of the study group for not attending college were as follows:

Financial	20
Not interested in college	9
Lacked both money and interest	2
Considered work experience more valuable	4
Could not decide on a course of study	2
Physically unable to attend	1
Had no encouragement from home or school	1
Parents objected to college	1
Personal choice—preferred to work	1

It is noteworthy that none of the study group gave a dislike of school as a primary consideration. Their reasons are about equally divided between lack of money and lack of interest.

The group were asked: *Have you considered attending college during the one year you have been out of high school?* Twenty-six answered yes; fifteen, no. When asked *Are you now working for the money to attend college?*, nine answered yes; thirty-two said no.

The group was queried about past scholarship opportunities and future possibilities. To the question *Did you apply for a scholarship to college while still in high school?*, six answered yes; thirty-five, no. Of the six who applied for scholarships, four were offered awards. All four declined; three, because the awards, of tuition only, were inadequate. The fourth was offered board, room, tuition, and fees. She declined, stating that she was obligated to help earn the family living. The two whose applications were denied were unable to say why they were unsuccessful. One had applied only to an out-of-state school; the other, to the Fund Program described in Part II.

Eleven of the forty-one replied affirmatively to the question *Were you offered a scholarship?* The eleven included the four (referred to above) who applied, and seven who did not! All seven declined the offers, either because of lack of interest or because the awards were considered insufficient.

The members of the study group were asked: *Would you consider a scholarship offer now?* Nineteen said they would; twenty-two said they would not. The nineteen who answered affirmatively were asked how large the scholarship award would need to be. The answers are tabulated below:

Partial tuition	1
Full tuition	3
Full tuition plus part-time employment	2
One-half of board, room, and tuition	2
Board, room, and tuition	11

One of those expecting full maintenance and tuition stipulated that she would not attend any New Mexico college or university.

Included among those still interested in scholarships were all nine who were working for money to attend college. Five of these indicated a need for full maintenance and tuition; four said that full or partial tuition would be sufficient.

Three Attitudes toward College

On the basis of their answers to the foregoing questions, the study group is logically divided into three sub-groups having quite different attitudes toward college. Group 1 consists of those nine graduates, six girls and three boys, who were earning money for college and planned to enroll later. Group 2 is made up of the ten, five girls and five boys, who indicated some interest in college but were not saving money for the purpose. The members of Group 2 would be willing to attend college if no financial sacrifice was entailed (and, presumably, if not too much effort was involved). Group 3 was made up of twenty-two graduates, fourteen girls and eight boys, who denied any interest in further education. In the following sections the characteristics of each group are examined briefly.

There was a small, systematic variation in the aptitudes of the three groups. The average statewide test percentile scores and the ranges of the scores for each group were as follows:

Group	*Average percentile*	*Percentile range*
1	89.5	78-97
2	85.8	76-97
3	83.5	76-97

Average high school grade indices did not follow this pattern, but assumed the following order:

Group	*High school grade index*[6]
1	2.70
2	2.51
3	2.72

The highest average grade index belonged to Group 3, made up of graduates with no interest whatever in college; however, there is some reason to question whether the three groups of students studied comparable programs in high school. Thirteen of the twenty-two members of Group 3 indicated that they liked vocational subjects best in high school; nine preferred "solid" subjects. In Group 2 four preferred vocational subjects, while six liked "solids." In Group 1 seven of nine preferred "solid" to vocational subjects.

6. A = 4, B = 3, C = 2, D = 1, F = 0.

All members of the first two groups liked high school. Four of the twenty-two members of the last said they did not. All those in Group 1 thought that they could have made better grades if they had worked harder. Seven of the ten in Group 2 and nineteen of the twenty-two in Group 3 shared this opinion.

The occupations of fathers of the three categories give no very significant clues to the differences in their attitudes:

	Groups		
	1	2	3
Farmer	3	2	3
Unskilled laborer	0	3	7
Skilled laborer	3	2	7
Bookkeeper	1	0	0
Manager	0	1	0
Unemployed	0	0	2
Deceased	2	2	3

No unskilled laborers are among the fathers of Group 1 members. The incidence of deceased fathers in all three classes is higher than normal.

Parental educational achievement appears to correlate positively with the attitudes of the three classes toward higher education:

Father's highest	Groups		
educational achievement	*1*	2	3
Grade school	2	4	11
High school	6	4	8
Business college	0	1	1
College	1	1	2

Mother's highest	Groups		
educational achievement	*1*	2	3
Grade school	3	2	8
High school	4	6	12
College	2	2	2

Only ten of the eighty-four parents had attended college. The median educational level of the fathers of Groups 1 and 2 is substantially higher than that of the Group 3 fathers. Apparently, parental educational attainment is strongly related—at least in the groups studied—to attitude toward higher education.

The parents of eight of the nine members of Group 1 were willing to assist them in their plans to attend college, but only three were at all able to do so. The parents of the ninth were unwilling to help. All the parents of the middle division were encouraging, but only four families of the ten were in position to contribute anything toward college expenses. In Group 3 five of the twenty-two families could help financially. None were unwilling. The families were remarkably similar in this respect.

Two members of Group 1 and two of Group 2 had brothers or sisters in college; there was only one college sibling reported by Group 3.

Most of the graduates in the first group were employed in jobs requiring minimal skill, but had vocational objectives quite unrelated to their employment. Members of the third category were employed in jobs requiring a comparatively high degree of skill. Their vocational objectives could, as a rule, be attained by continued employment in their current jobs. The members of Group 2 could not be so simply typed.

Summary

Of the 1079 students who as juniors scored in the upper quartile on the New Mexico statewide college aptitude test in 1951-52, almost 60 per cent are known to have graduated from high school and entered college in 1953. About 17 per cent either did not graduate or could not be traced. The remainder, 23.4 per cent, did not enroll in college, although they did graduate from high school. Within the 23.4 per cent, 10.2 per cent were girls who married; 2.5 per cent enrolled in vocational schools, and 4.1 per cent entered military service. Only 6.5 per cent of the survey group are known to have entered employment immediately after graduation.

In this latter, rather small fraction with no apparent reason for rejecting higher education, there was an evident lack of motivation. Of the forty-one members of this group interviewed, only nine considered college a goal worth working and saving for. About half of the forty-one probably would have entered college if urged and financed by their families, but a number of these would probably not have been successful students.

It should be a matter of satisfaction to New Mexico that at least two-thirds of its ablest high school graduates ultimately enroll in college. Of those who do not, a third are girls who marry on graduation. The others are deterred by a combination of factors in which a lack of money, ambition, and orientation toward higher education play mingled roles. If it is desirable for every high school graduate of high ability to enroll in college (a debatable proposition), early counseling obviously is as essential as an adequate program of student aid. Many such graduates who do not attend college could enroll if they and their families were persuaded of its value.

V

An Evaluation

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AN EVALUATION

The administrators of this project, as it was conceived by them and confirmed by the Fund for the Advancement of Education, had a threefold aim: (1) to formulate a plan whereby students of more-than-average ability but of limited financial means could be given financial assistance toward college education in the liberal arts, (2) to locate such students in New Mexico, and (3) as a step toward a better understanding of the general attitudes of young New Mexicans toward higher education, to conduct studies of the factors influencing college enrollment in this state and of the situations tending to prevent such enrollment. The two studies were to be concerned principally with young people who as high school students had evidenced marked competence.

The actual scholarship program, carried on throughout the school years 1952-53, 1953-54, and 1954-55, bore considerable fruit, both in the matter of determining proper procedures for such a program and in the matter of academic results on the part of the scholars selected to participate. During the three years the administrators received 547 applications for scholarships, awarded 212, and had 193 accepted. Through thorough checking of each applicant's eligibility, scholastic and financial, the administrators became aware of the unexpected fact that apparently only about 65 (or slightly more than 1 per cent) of the State's annual high school graduates possess both the competence and the motivation to attend college, coupled at the same time with a lack of money to do so.

Data on both the successful candidates and those who were unsuccessful supported this conclusion, for more than half of those young people failing to qualify for scholarships nevertheless went on to college, and the administrators had reason to believe that another 20 per cent would eventually enroll.

As to the mechanics of administering such a scholarship program, those in charge found these methods to have particular merit:

1. A small group of administrators can probably work more efficiently, effectively, and diplomatically than a large group could. In this particular case, there were only three.

2. Scholarship eligibility can be satisfactorily determined on the following bases: a broad but specific application form, at least one letter of recommendation, a confidential interview with the individual's high school principal or counsellor, the applicant's high school transcript, and thorough local investigation of the financial status of the individual applicant.

3. It is wise to limit the amount of such scholarships to a maximum covering only tuition and fees and room and board, reducing that maximum by the amount of any financial assistance the scholar is to receive from other sources. It is also best to pay the full amount of the aid directly to the institution involved, rather than to make the student responsible for the handling and use of the scholarship funds.

4. Any extension of aid should be predicated upon the ascertaining of a continuing financial need.

5. All scholars should be encouraged to find means whereby they can contribute to their own upkeep.

6. In order to protect the scholar from undue recruiting pressure from other colleges, an award made on the basis of planned attendance at a particular institution should be specified as nontransferable.

7. Administrators should pay frequent visits to institutions which have enrolled scholarship holders.

8. Scholarship students should have intensive personal and academic counseling, especially during the freshman year.

The study of patterns of college attendance and nonattendance strengthened the opinion of the administrators that the chief barrier to college enrollment—at least, in New Mexico—apparently is not a financial one. Rather, the handicap seems to be cultural—a lack of orientation toward higher education.

The second study—that of high school students who as juniors had scored in the upper quartile on the New Mexico statewide college aptitude test—indicated that about two-thirds of the State's most promising high school students go on to college. Something like a third of those not enrolling in institutions of higher learning

are girls who marry soon after graduating from high school. The paramount deterrents for the remaining students appear to be three lacks—with the last two probably being more significant: a lack of money, a lack of ambition, and a lack of orientation toward higher education.

Finally, the administrators arrived at the over-all conclusion that early counseling of high school students and efforts to persuade families of the importance of higher education are at least as important as programs supplying financial aid to potential college students. Family income, the administrators are convinced, may well be an excellent index of the probability of a young person's attending college; it does not always constitute the determining factor.